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DRAFT RESOURCE MANAGEMENT PLAN
AND ENVIRONMENTAL IMPACT STATEMENT

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EGAN RESOURCE AREA

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Prepared by the

DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
ELY DISTRICT

Roger J. McCormack
Associate State Director, Nevada

The proposed resource management plan is a long-range plan to manage 3.8 million acres of public land within the Egan Resource Area. The action responds to the mandate of Section 202 of the Federal Land Policy and Management Act of 1976 to develop land use plans for the public land. The plan sets forth five multiple-use alternatives to guide the overall management of the resource area and site-specific decisions designed to resolve three key management issues.

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SUMMARY

SUMMARY

Introduction

The Bureau of Land Management is proposing to implement a Resource Management Plan (RMP) for the Egan Resource Area of the Ely District, Nevada. The Egan Resource Area encompasses approximately 3.8 million acres of public land in east central Nevada. The majority of the resource area is located in White Pine County. Portions of the resource area are also located in Nye and Lincoln Counties.

The Egan Resource Management Plan is designed to provide management direction to resolve three issues concerning the management of the public lands. This document describes the management actions that are being proposed for implementation, the alternatives that were considered, and an environmental analysis as required by the National Environmental Policy Act of 1969.

Issues

The Egan Resource Management Plan will be addressing the three issues listed below:

1. Range Management
2. Realty Actions
3. Wilderness Study Areas

The Egan Resource Management Plan is specifically tailored to provide management direction for these issues only. This is not to say that other issues concerning such matters as minerals management, cultural resources, and recreation management will be left out of the decision making process. Decisions regarding these issues will be handled through normal administrative procedures. Decisions affecting these resources will still be guided by the Federal Land Policy and Management Act of 1976 (FLPMA), the National Environmental Policy Act of 1969 (NEPA), and the National Historic Preservation Act of 1966.

This Resource Management Plan contains only preliminary wilderness recommendations. Wilderness is treated differently than the other resources because it is Congress that will make the final decisions on which if any of the wilderness study areas are designated as wilderness. A separate final wilderness environmental impact statement will be filed by the Secretary of the Interior at a later date. It will contain information drawn from this Resource Management Plan and the accompanying Egan Wilderness Technical Report.

Alternatives

The Egan Resource Management Plan contains a Preferred Alternative and five other alternatives for how the Egan Resource Area should be managed. Each alternative, will provide a different approach to how the resource area should be managed, varying from no action; and resource protection, to resource development. The theme for each alternative is discussed below.

Preferred Alternative: This alternative emphasizes a balanced approach to land management in the resource area. Fragile and unique resources would be protected while not overly restricting the ability of other resources to provide economic goods and services. It is a combination of various alternatives.

Alternative A: This alternative represents a continuation of present resource management uses and levels. The resource area would continue to be managed without a long range plan and actions would be determined on a case-by-case basis as circumstances and/or public demand dictate.

Alternative B: This alternative is oriented toward preservation of natural values, with emphasis on protecting wildlife and riparian habitats, wild horses, and wilderness values.

Alternative C: This alternative is designed to provide a wide variety of goods and services to the public within the sustained use capabilities of the Egan Resource Area.

Alternative D: This alternative is designed to emphasize the management of those resources contributing to the commercial well-being of the resource area.

Alternative E: This alternative is designed to emphasize the protection of natural values through the removal of all livestock grazing from public lands.

Table S-1 illustrates the Summary of Impacts by Alternative.

Table S-1

Summary of Impacts by Alternative

	Preferred Alternative	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Vegetation	Short-Term: insignificant beneficial (all zones)	Short-Term: insignificant adverse (all zones)	Short-Term: insignificant beneficial (all zones)	Short-Term: insignificant beneficial (all zones)	Short-Term: insignificant adverse (all zones)	Short-Term: insignificant beneficial (all zones)
	Long-Term: significant beneficial (all zones)	Long-Term: significant adverse (all zones)	Long-Term: significant beneficial (all zones)	Long-Term: significant beneficial (all zones)	Long-Term: significant adverse (all zones)	Long-Term: significant beneficial (all zones)
Livestock	Short-Term: insignificant beneficial (all zones)	Short-Term: no change	Short-Term: significant adverse	Short-Term: no change	Short-Term: significant beneficial	Short-Term: significant adverse
	Long-Term: significant beneficial (all zones)	Long-Term: significant adverse	Long-Term: significant adverse	Long-Term: significant beneficial	Long-Term: significant beneficial	Long-Term: significant adverse
Wildlife	Short-Term: insignificant beneficial (all zones)	Short-Term: insignificant adverse (all zones)	Short-Term: insignificant beneficial (all zones)	Short-Term: insignificant beneficial (all zones)	Short-Term: insignificant adverse (all zones)	Short-Term: insignificant beneficial (all zones)
	Long-Term: significant beneficial (all zones)	Long-Term: insignificant adverse (all zones)	Long-Term: significant beneficial (all zones)	Long-Term: significant beneficial (all zones)	Long-Term: significant adverse (all zones)	Long-Term: significant beneficial (all zones)

Table S-1 (Continued)

Summary of Impacts by Alternative

	Preferred Alternative	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Wild Horses	Short-Term: insignificant beneficial (all zones)	Short-Term: insignificant adverse (all zones)	Short-Term: insignificant beneficial (all zones)	Short-Term: insignificant beneficial (all zones)	Short-Term: insignificant adverse (all zones)	Short-Term: insignificant beneficial (all zones)
	Long-Term: significant beneficial (all zones)	Long-Term: significant adverse (all zones)	Long-Term: significant beneficial (all zones)	Long-Term: significant beneficial (all zones)	Long-Term: significant adverse (all zones)	Long-Term: significant beneficial (all zones)
Land Ownership and Corridor Patterns	Short-Term: insignificant beneficial	Short-Term: insignificant beneficial	Short-Term: insignificant beneficial	Short-Term: same as Preferred	Short-Term: significant beneficial	Short-Term: no effect
	Long-Term: significant beneficial	Long-Term: significant adverse	Long-Term: significant adverse	Long-Term: same as Preferred	Long-Term: significant beneficial	Long-Term: no effect
Wilderness	Short-Term: insignificant beneficial and adverse	Short-Term: insignificant adverse	Short-Term: insignificant beneficial	Short-Term: insignificant adverse and beneficial	Short-Term: insignificant adverse and beneficial	Short-Term: insignificant beneficial
	Long-Term: significant beneficial and adverse	Long-Term: significant adverse	Long-Term: significant beneficial	Long-Term: significant beneficial	Long-Term: significant adverse and beneficial	Long-Term: significant beneficial

EGAN RESOURCE MANAGEMENT PLAN

Table S-1 (Continued)

Summary of Impacts by Alternative

	Preferred Alternative	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Minerals and Energy	Short-Term: significant adverse	no impact	significant adverse	significant adverse	insignificant adverse	significant adverse
	Long-Term: significant adverse	no impact	significant adverse	significant adverse	insignificant adverse	significant adverse
Social Analysis	Short-Term: insignificant beneficial	Short-Term: no impact	Short-Term: significant adverse	Short-Term: insignificant beneficial	Short-Term: insignificant adverse	Short-Term: significant adverse
	Long-Term: insignificant beneficial	Long-Term: no impact	Long-Term: significant adverse	Long-Term: insignificant beneficial	Long-Term: insignificant adverse	Long-Term: significant adverse
Economic Analysis	Short-Term: insignificant beneficial	Short-Term: no impact	Short-Term: significant adverse	Short-Term: insignificant beneficial	Short-Term: insignificant adverse	Short-Term: significant adverse
	Long-Term: insignificant beneficial	Long-Term: no impact	Long-Term: significant adverse	Long-Term: insignificant beneficial	Long-Term: insignificant adverse	Long-Term: significant adverse

Table S-1 (Continued)

Summary of Impacts by Alternative

	Preferred Alternative	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Forestry	Short-Term: 28,440 acres	Short-Term: no impact	Short-Term: 15,440 acres insignificant	Short-Term: 28,440 acres significant	Short-Term: 22,610 acres significant	Short-Term: no impact
	Long-Term: same	Long-Term: no impact	Long-Term: same	Long-Term: same	Long-Term: same	Long-Term: no impact

CHAPTER 1

PLANNING ISSUES AND CRITERIA

CHAPTER ONE

PLANNING ISSUES AND CRITERIA

PURPOSE AND NEED

Section 202 of the Federal Land Policy and Management Act of 1976 (FLPMA) states "The Secretary shall, with public involvement and consistent with the terms and conditions of this Act, develop, maintain, and when appropriate, revise land use plans which provide by tracts or areas for the use of the public lands." The guidance for preparing this plan, which is known as a Resource Management Plan (RMP), is contained in 43 CFR Part 1600, Public Lands and Resources; Planning, Programming, and Budgeting.

The National Environmental Policy Act of 1969 (NEPA) requires Federal agencies to prepare statements documenting the environmental consequences of Federaal actions significantly affecting the human environment. Resource management plans qualify as significant actions and thus require the preparation of an environmental impact statement (EIS). The Council on Environmental Quality's Regulations for Implementation of the Procedural Provisions of NEPA (40 CFR Part 1500) provide guidance for the preparation of environmental impact statements. This document combines the preferred resource management plan and its environmental impact statement into an integrated package.

The overall purpose of the resource management planning process is to improve the resources of the resource area which would result in increased goods and services to the public land users and general public. This will be accomplished through a planning process using an interdisciplinary approach that includes participation by the public, other Federal agencies, state and local governments, and Indian tribes. Resource management plans are designed to make maximum use of the best available data in formulating and analyzing alternatives.

The Egan Resource Management Plan is designed to provide a framework for future management of the public lands and resources in the Egan Resource Area. This framework will be established by determining which resources will be given management emphasis. This will be consistent with existing legislation, regulations, and the policy of management of public lands on the basis of multiple use and sustained yield. This will be done "in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmosphere, water resource, and archaeological values" (FLPMA, Sec. 102 (a)(7) and (8)).

In addition to meeting the planning needs for the Egan Resource Area, the RMP also fulfills other specific objectives. This draft RMP includes evaluation of four Wilderness Study Areas (WSAs) also required by FLPMA. Through study of the alternatives, the value of these WSAs for wilderness or other uses will be determined and the consequences analyzed. In accordance with BLM policy the following procedure will be used in addressing environmental concerns pertaining to wilderness designation. Environmental impacts of wilderness designation will be incorporated into the Bureau planning process through the draft RMP stage. This draft document presents the impacts to wilderness and other resources by alternative in summary form. Comments received from this document on wilderness will be presented in a Preliminary Final Egan Wilderness EIS to be published as a separate document from the final RMP. This EIS will be submitted through the BLM Director and Secretary of the Interior to the President. The recommendations contained in this final wilderness EIS will be preliminary because they are subject to change by the BLM Director, Secretary of the Interior or President before they are presented to Congress for legislative action. Specific information is incorporated into the Egan Wilderness Technical Report which is available on request for those who desire more information.

A suit was filed in 1973 in Federal Court alleging that the Bureau of Land Management's programmatic grazing environmental impact statement did not comply with the National Environmental Policy Act. As a result of the settlement of this suit, BLM agreed to prepare specific grazing EISs. The resource management plan will meet this objective.

Finally, the resource management plan will also identify lands which will be made available for sale or exchange to consolidate ownership for improved management and to meet other important public objectives.

THE PLANNING PROCESS

The Egan Resource Management Plan is being prepared in accordance with the Bureau of Land Management's planning regulations (43 CFR 1601). The process consists of the following nine steps: 1) identification of issues; 2) development of planning criteria; 3) collection of inventory data and information; 4) analysis of the management situation; 5) formulation of alternatives; 6) estimation of effects of alternatives; 7) selection of preferred alternative (draft plan/EIS); 8) selection of the resource management (final plan/EIS), and 9) monitoring and evaluation.

In July 1981 an interdisciplinary team was established to prepare this document.

SETTING

The Egan Resource Area covers approximately 4.5 million acres of land in Nye, Lincoln and White Pine Counties in eastern Nevada. Of this area, 3.8 million acres of public land are managed by the Ely District Bureau of Land Management (Map Int-1 and Table Int-1).

Ranching and mining have historically been the main industries within the Egan Resource Area. Agricultural activities include cattle, sheep and hay production. Copper, tungsten, lead, zinc, silver, gold, manganese, berryllim, molybdenum and tellurium have all been mined to some degree in the area. The most recent addition to the economy has been tourism, with an emphasis on overnight tourist facilities and outdoor recreational opportunities.

Ely is the largest urban center in the Egan Resource Area and serves as the hub for government, recreation, tourism and commerce. The 1982 estimated population for Ely according to the White Pine County Chamber of Commerce is 5,717. The estimated entire White Pine County population was reported to be 9,527. Smaller communities include Ruth, McGill, Preston, Lund, Cherry Creek, Currant, and the Duckwater Indian Reservation.

ISSUES AND CRITERIA

Resource management plans are limited to issues which are of major concern and importance to the BLM and the public it serves. The previous planning system provided detail on a wide range of issues and concerns without considering their overall significance.

Minerals are addressed indirectly in other issues and in the impact analysis section. ACEC and T&E species issues are considered under standard operating procedures. The range improvement issue is discussed in the specific proposals for livestock grazing under the various alternatives.

The three planning issues described in this chapter are the heart of this plan. The Egan Resource Management Plan is designed to resolve these issues. Other resource uses not expressly included as an issue will be managed under the principles of balanced multiple use management. Implementation actions will be guided by the Consistency requirements (43 CFR 1610.3-2) and Conformity and implementation provisions of 43 CFR 1610.5-3. Further decisions affecting these resources will still be guided by the Federal Land Policy and Management Act of 1976 (FLPMA), and the National Environmental Policy Act of 1969 (NEPA).

One issue, Sensitive Resources, has been deleted since September 1982 publication of the Issues and Planning Criteria for the Egan Resource Management Plan. Additional review of this issue determined that existing laws and regulations proved sufficient management direction for this issue thereby making further analysis unnecessary.

Part of the Realty issue, easement acquisitions was carried through the public comment period of the alternatives formulation step of this document. Insufficient public comment was received on this component and the easement acquisition part of the Realty issue has also been deleted from the planning process.

There are no areas of critical environmental concern within the Egan Resource Area.

Criteria Upon Which the Selection of the Preferred Alternative and Planning Decisions will be Based

Public comments from interested and affected publics at all levels--local, state, regional, and national--will be considered.

Public land areas will host multiple uses, except where a single use is in the public interest.

The renewable resources of the public lands will be managed on a sustained-yield basis.

The present and potential uses of the public land will be considered.

The relative scarcity of resource values and the availability of alternative sources of supply will be considered.

The relative value of long-term and short-term public benefits will be considered.

Special attention will be given to socio-economic impacts upon local communities.

The resource management plan will comply with the various state and federal environmental protection laws.

The resource management plan will be consistent with the planning and management programs of other federal agencies, state and local government and Indian tribal governments except where they conflict with the Bureau of Land Management's legal mandate.

The impact of alternative decisions upon adjacent federal and nonfederal land will be considered. All decisions will be consistent with the laws and regulations that govern the actions of the Bureau of Land Management.

PLANNING ISSUE NUMBER 1

The Bureau of Land Management is responsible for administering the rangeland vegetation. This responsibility includes protecting the integrity and productivity of the vegetation resoure, while making vegetation and habitat available for livestock, wild horses, and wildlife. One aspect of this responsibility is the management of the range. To meet this responsibility the BLM will develop range management practices based on the concepts of sustained yield and multiple use.

Planning Questions Related to Issue Number 1

1. How can the vegetation resources be managed under the "Rangeland Management Policy" for the benefit of livestock, wild horses and wildlife? Under the "Rangeland Management Policy" similar allotments would be identified as belonging to one of three categories, for which the objective would be to: maintain current satisfactory condition; improve allotments in unsatisfactory condition; or to manage allotments custodially, while still protecting the existing resources values.

2. How can range use be administered to protect and improve riparian areas to good or better condition as required by existing Executive Orders?

3. How can fire management be used to modify vegetation for the benefit of livestock, wild horses, and wildlife?

Planning Criteria Related to Issue Number 1

Inventory Criteria: 1. Use the monitoring procedures established in 1981 by the Nevada Range Studies Task Group to obtain range data. 2. Identify wild horse herd areas. 3. Obtain actual use data. 4. Determine migration routes, habitats, winter ranges and desired population levels for wildlife from the Nevada Department of Wildlife. 5. Gather social and economic information relating to the effect of range management on the ranching industry and the local community. 6. Identify management conflicts associated with the range management program. 7. Analyze fire reports to determine fire occurrence, the rate of spread for fire and the resource values which may be destroyed. 8. Identify range improvement needs.

Criteria for Estimating Effects: The impact of the proposed alternatives on the environment will be based on the implied legal, social, economic, biological and physical consequences (positive and negative).

Criteria Guiding the Development of Alternatives:

Protection Parameter: 1. Vegetation management will be designed for the primary benefit of wild horse, wildlife and riparian areas, and the secondarily to benefit livestock. 2. Fire management policy will recognize that fire is part of the natural ecosystem. modified suppression and prescribed burns will be used to restore natural resoruce values. 3. Land management actions will be designed to safeguard wildlife and wild horse habitats.

Development Parameter: 1. Vegetation will be managed for the primary benefit of livestock. 2. Fire management policy will be based on using fire to protect and improve livestock economic opportunities. 3. Land management actions will be designed to emphasize use and disposal of public lands.

PLANNING ISSUE NUMBER II

Eighty-five percent of the land within the Egan Resource Area is administered by the Bureau of Land Management. Possible future economic opportunities include the White Pine Power Project, agricultural development, and the continued expansion of the mining industry. Should these economic opportunities begin to materialize, additional people will be attracted to the region. The BLM has a responsibility, as the need arises, to assure that the public lands are available for community expansion, agricultural development, utility corridors, and other public purposes.

Planning Questions Related to Issue Number II

1. Which lands are suitable to be disposed of for development by private and other public entities?

2. Various utility companies have proposed a series of utility corridors through the Ely District. Where and how many utility corridors should be planned and designated?

Planning Criteria Related to Issue Number II

Inventory Criteria: 1. Identify lands suitable for disposal and utility corridors.

Criteria for Estimating Effects: The impact of the proposed alternatives on the environment will be based on the implied legal, social, economic, biological and physical consequences (positive and negative).

Criteria Guiding the Development of Alternatives:

Protection Parameter: 1. Land which is isolated, uneconomic to manage, or available for community expansion will be disposed of if this use does not conflict with wildlife or wild horse habitat. 2. Utility corridors will be located where existing utility lines occur.

Development Parameter: 1. All land that is isolated, uneconomic to manage, or available to meet community expansion needs may be disposed of. Utility corridors will be permitted based on the preferred routes of the utility companies.

PLANNING ISSUE III

Four areas with wilderness characteristics are located largely or entirely within the Egan Resource Area. They are: Goshute Canyon (NV-040-015), Park Range (NV-040-154), Riordan's Well (NV-040-166), and the South Egan Range (NV-040-168). A wilderness study will be conducted to determine if wilderness preservation is the highest and best use of these areas.

Planning Questions Related to Issue Number III

1. What wilderness values do these areas have?

2. What other resource values occur in these areas and what is the significance of the conflict between these and wilderness designation?

3. Can the proposed wilderness areas be managed as wilderness over the long term?

Planning criteria Related to Issue Number III

Inventory Criteria: 1. Obtain public input. 2. Assemble existing wilderness inventory data on the mandatory wilderness characteristics (size, naturalness, and outstanding opportunities for solitude or primitive recreation) and the supplemental values (ecological, geological, or other features of scientific, educational, scenic, or historical value) present in each wilderness study area. 3. Gather social, economic, and mineral data to evaluate highest and best use of wilderness study area.

Criteria for Estimating Effects: The impacts of the proposed alternatives on the environment will be based on the implied legal, social, economic, biological, and physical consequences (positive and negative).

Criteria Guiding the Development of Alternatives:

> **Protection Parameter:** All wilderness study areas in their entirety will be recommended as suitable for wilderness designation.
>
> **Development Parameter:** Recommend as suitable all acreage with good quality wilderness characteristics and with no significant existing or potential resource conflicts or manageability problems or significant combinations of lesser conflicts or problems.

OFF-ROAD VEHICLE DESIGNATION

Off-road vehicle use allocation did not emerge as an issue during scoping for the Egan Resource Management Plan. However, off-road vehicle designations will be done through the planning process for the Egan Resource Area in compliance with Executive Orders 11644 (Use of Off-Road Vehicles on Public Lands) and 11989 (Off-Road Vehicles on Public Lands).

Public lands within the Resource Area must be designated either *open*, *limited* or *closed* to off-road vehicle use. Constraints on off-road vehicle use need to be based on identifiable and defendable concerns. An undefined "potential" for off-road vehicle use damage is not adequate justification for constraints on off-road vehicle use. Damage must be shown to be occurring or imminent.

To evaluate the necessity and appropriateness of constraints on off-road vehicle use, inputs were solicited from all Ely District resource specialists during August of 1982. While some off-road vehicle conflicts and potential for damage were identified, no restrictions on off-road vehicle use were proposed. In instances where specialists had concerns for potential damage, they felt that resource protection could be accomplished with "open" off-road vehicle designations through alternate strategies. These consist of emergency closures for areas endangered by vehicle use; alternative protections such as the Interim Management Plan for wilderness; use of the Environmental Assessment process and specialist review for authorizing organized, competitive off-road vehicle events; field monitoring of fragile and environmentally sensitive areas; and eventual limitations on off-road vehicle use through the designation process.

MINERAL RESOURCES MANAGEMENT

Mineral resources management was not included as a planning issue because the Bureau's mineral resources policy provides that, the public lands shall remain open and available for mineral exploration and development unless withdrawal or other administrative action is clearly justified in the national interest. Minerals are, therefore, addressed indirectly in other issues and in the impact analysis section.

CHAPTER 2

ALTERNATIVES

CHAPTER TWO

ALTERNATIVES

INTRODUCTION

This chapter presents the Preferred Alternative and the five other alternatives that were considered in the development of this plan. Each alternative will emphasize certain resource uses such as livestock production, or wildlife habitat protection. In accordance with the National Environmental Policy Act (Part 1502.14d) a No Action Alternative has been included.

MANAGEMENT ALTERNATIVES

A Preferred Alternative and five additional alternatives have been developed for this management plan. The Preferred Alternative is the alternative which is being considered for implementation. The other alternatives are being presented to show the possible range of management actions that could be implemented.

The five Alternatives are:

1. Preferred Alternative - This emphasizes a balanced approach to land management in the resource area. Fragile and unique resources would be protected, while not overly restricting the ability of other resources to provide economic goods and services. This alternative selects the best management action for each issue to fit the specific management zone.

2. Alternative A - This represents a continuation of the present resource uses and levels. No major resource developments would take place. This is the proposed action for livestock grazing.

3. Alternative B - This represents a multiple use alternative designed for the protection and enhancement of natural resource values, with an emphasis on managing for the benefit of fragile and unique resources, wildlife, wild horses, and wilderness values.

4. Alternative C - This represents a multiple use alternative designed to provide a wide variety of goods and services to the public within the sustained use capabilities of the resources.

5. Alternative D - This represents a multiple use alternative designed to emphasize the management of those resources contributing to the commercial well-being of the public using natural resources (livestock grazing, minerals, etc.).

6. Alternative E - This represents an alternative designed for the protection and enhancement of natural resource values. This would eliminate all livestock grazing from the public lands, while managing for the benefit of fragile and unique resources.

DESIGNATION OF MANAGEMENT ZONES

Because of the large size of the Egan Resource Area (approximately 3.8 million acres of public land), it was decided to divide it into smaller management zones having similar resource uses and conflicts. Boundaries were drawn along grazing allotment boundaries where practical to facilitate planning and impact analysis.

1. Buck and Bald/Diamonds - This medium sized management zone (about 736,000 acres) includes most of the resource area's largest wild horse herd, the winter range for the largest deer herd in the state and is used for livestock production. According to

Nevada Department of Wildlife, the zone has less than two-thirds of reasonable numbers of wildlife for the zone. There is potential for reintroductions of antelope. Livestock operators are licensing less than half of the preference level of Animal Unit Months (AUMs). Professional judgement and preliminary data from monitoring studies indicate that forage demand is far greater than current forage production and, in certain areas, there is competition between wild horses, livestock, and wildlife for available forage.

In addition, this zone contains the bulk of the resource area's wet meadow riparian areas. No Wilderness Study Areas are in the zone. There have been requests for land disposal, especially adjacent to the exisitng ranches. One potential utility corridor crosses east to west in the southern end of the zone.

2. Duckwater/Buttes - This is the largest of the management zones encompassing about 1,757,000 acres. A portion of the resource area's largest wild horse herd and all of the next three largest wild horse herds use this zone. According to the Nevada Department of Wildlife, existing numbers of wildlife are just over one half of the number considered reasonable for the zone. The area also has potential for reintroductions of antelope. Livestock operators have been licensing at about 56 percent of preference levels. Professional judgement and preliminary data from monitoring studies indicate that forage demand is far greater than current forage production.

One half of the Goshute Canyon Wilderness Study Area and all of the Park Range and Riordan's Well Wilderness Study Area are in this zone. There have been requests for land disposal, expecially adjacent to the existing farms. Up to two north-south and one east-west utility corridors have been identified in this zone.

3. Steptoe/Horse and Cattle Camp - This relatively large management zone (963,000 acres) runs along the east side of the resource area. While small portions of three wild horse herds occur in the zone (Antelope, White River, and Cherry Creek herds) these herds will be administered by the other resource areas which have the majority of the wild horses on them. Primary forage use in the area is by wildlife (elk, antelope, and mule deer) and livestock. According to the Nevada Department of Wildlife there are about 80 percent of reasonable numbers of wildlife within the zone. Livestock operators license about 65 percent of preference levels in the zone. Professional judgement and preliminary data from monitoring studies indicate that forage demand is somewhat greater than current forage production.

One of the primary concerns in the zone is stream riparian habitat. The majority of the resource area's stream riparian habitat is in this zone. About half of the Goshute Canyon Wilderness Study Area is in this zone as well as all of the South Egan Wilderness Study Area. There have been many requests for land disposal in Steptoe Valley, especially surrounding the communities of Ely and McGill and the many existing ranches. Two east-west and one north-south utility corridors have been identified for this zone.

4. Jakes Valley - This small management zone (about 102,000 acres) contains a portion of a herd of wild horses (Jake's Wash Herd). Wildlife use in the area is less than two-thirds reasonable numbers and livestock operators are licensing at less than 40 percent of preference levels. There are no streams within this zone. Professional judgement indicates that total forage demand may be slightly greater than current forage production.

There are no wilderness study areas in the zone. There have been some requests for land disposal in Jake's Valley, especially adjacent to existing ranches. There is one potential east-west and one potential north-south utility corridors in the zone.

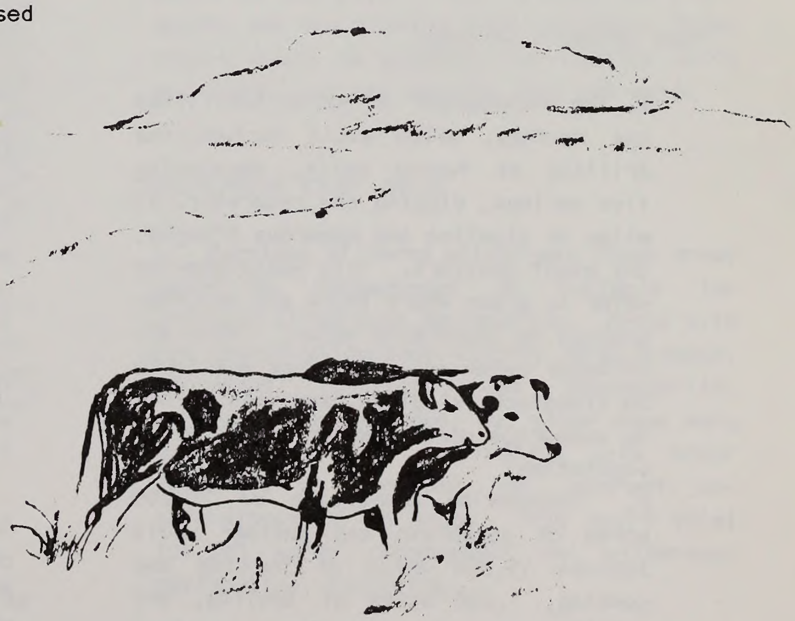
5. West Lund Flats - This is a small management zone (about 284,000 acres). About half of the small Jake's Wash Wild Horse Herd unit is in the zone which also contains big game. The dominant use of forage in the zone is domestic livestock. Livestock operators in the zone license at a rate of about 80 percent of preference. Professional judgement indicates that there is limited competition between wild horses, livestock, and wildlife. There are no

Wilderness Study Areas in the zone. One potential north-south utility corridor exists in the zone. There have been requests for for land disposal in this zone, especially adjacent to existing ranches and surrounding the communities of Preston and Lund.

Management Objectives Rationale

The management objectives developed for this plan are based on the recognition that plant communities exist or may exist in many successional stages. Some of these succesional stages are more desirable for a particular use than others. On this basis, management objectives have been set for each plant community, for each Zone and for each alternative. The objectives are compared with the existing situation for the particular plant community by Zone. This information is displayed in Appendix 5.

Where the desirable level of plant succession is something other than the existing plant community that level will be attained through improved grazing management techniques or through vegetation conversion techniques. The primary method of conversion will be through prescribed burning, but under some circumstances may also include chaining, plowing and application of other herbicides. Regeneration of desirable plants will primarily be through the natural process of plant succession but may also include direct seeding. This will assessed on a site-by-site basis.



PREFERRED ALTERNATIVE

Objective

The objective of this alternative is to emphasize a balanced approach to land management, protecting fragile and unique resources, while not overly restricting the ability of other resources to provide economic goods and services.

Management Actions

RANGELAND MANAGEMENT

Short-term Actions (0-5 years)

1. Initially authorize livestock use at the three-year average licensed use, which is 123,461 AUMs (Animal Unit Months).

2. Range improvement projects would be developed which emphasize the greatest return on investment in relationship to resource needs. A complete list of projects, by zone, can be found in Appendix 1.

These projects include:

> a. The development of water facilities and systems, which would include the drilling of twelve wells, developing five springs, digging one reservoir, 11 miles of pipeline and numerous troughs, and eight guzzlers. This would provide water in areas where there are no other sources of available water. This additional water would be made available to livestock, wildlife, and wild horses to encourage more even utilazation of vegetation;
>
> b. vegetation conversion of 20,200 acres of sagebrush and juniper would include 15,500 acres of burning and seeding, 1,200 acres of seeding, and 3,500 acres of prescribed burning. This will increase available forage for livestock, wild horses, and wildlife and improve water infiltration and holding capacity. Available forage (additional AUMs) will be increased because of all types of range improvement projects.

3. Continue existing rangeland monitoring studies and establish new studies as needed. Monitoring studies would be used to determine if adjustments in livestock and wild horse numbers were necessary.

4. Wild horses would be managed at 1,451 animals in the following herd use areas: Sand Springs, 494; Monte Cristo, 96; Buck and Bald, 700; Butte, 60; Cherry Creek, 11; Antelope, 14; Jake's Wash, 20; White River, 20; Diamond Hills, 36. The Monte Cristo Herd Management Area would be managed at 96 animals in accordance with an approved management plan; small portions of the Diamond Hills, Cherry Creek, Antelope, and White River wild horse herds occur in the Egan Resource Area, but would be managed by other resource areas (Shoshone-Eureka, Wells, and Schell) containing the bulk of the herds; the Buck and Bald Herd Management Area would be managed at approximately 700 animals which is an interim level established through a gathering plan and environmental assessment written in 1981; the remaining herds would be managed at the 1982-83 levels; and studies would be undertaken in 1984, in conjunction with BLM (Battle Mountain District) to determine the accuracy of the existing boundary of the Diamond Valley Herd Management Area.

5. Monitoring efforts would be intensified on both stream and other riparian areas. Where management objectives are not being obtained through application of management practices, fencing will be considered.

6. A resource area-wide fire management plan would be developed which allows a broad spectrum of uses. Fire would be used as a tool when it is the most effective and efficient method for improving habitat and increasing available forage.

7. Habitat would be managed for existing levels of wildlife species. Reintroductions of big game species would be accomplished in cooperation with the Nevada Department of Wildlife, where such reintroductions would not conflict with existing uses and if sufficient forage is available.

8. All vegetation would be managed for those successional stages which would best meet the objectives of this alternative. These desired successional stages of vegetation have been identified in Appendix 5. The implementation of grazing systems, construction of range improvements, initial stocking rates, and future adjustments of livestock and wild horse numbers, if necessary, will determine to what extent the desired levels for vegetation management are reached.

Long-Term Actions (5 to 20 years)

1. In the long-term, the range monitoring program would provide data on which to base additional future adjustments in livestock and wild horse grazing and to determine additional improvements.

2. The allotment categories of maintain, improve, and custodial would be evaluated periodically. These evaluations would assure the management objectives are being reached and that range improvements would be initiated for those allotments with the greatest potential for improvement in resource conditions and return on investment.

3. Providing forage for reasonable numbers of big game would be a long-term objective. It is anticipated that additional habitat management plans will be prepared and implemented in the long-term.

REALTY MANAGEMENT

1. Those lands which would be disposed of are those lands previously identified for disposal and which do not contain key wildlife habitat or key wild horse habitat. This would amount to disposing of up to 79,888 acres. All land disposals would be done so in a planned and orderly manner. A breakdown by management zone is as follows:

   a. Zone 1 - dispose of up to 11,620 acres;
   b. Zone 2 - dispose of up to 8,669 acres;
   c. Zone 3 - dispose of up to 52,199 acres;
   d. Zone 4 - dispose of up to 380 acres;
   e. Zone 5 , dispose of up to 7,020 acres.

Land disposals will not adversely affect threatened or endangered species or their habitat, or reduce the likelihood of their recovery, nor will these sales lead to the loss, destruction, or degradation of wetlands or riparian areas, or lead to the modification, occupancy, or loss of the natural and beneficial functions of floodplains.

Refer to the Lands and Wilderness (Preferred Alternative) Map at the end of this chapter for the lands identified for potential transfer. It should be noted that, because of the small scale, these maps are for general location only and should not be considered completely accurate.

2. Two utility and transportation corridors would be designated, one running north and south, and one running east and west. Three others would be planned, two running north and south, and one running east and west.

WILDERNESS STUDY AREAS

1. Portions of three wilderness study areas would be recommended as suitable for possible wilderness designation. Areas with the lowest wilderness quality were dropped. Important conflicts and manageability problems were excluded, but minor ones were excluded only in combination with other conflicts or problems, or apparent unnaturalness of an area. This would total 106,598 acres recommended for wilderness designation, including:

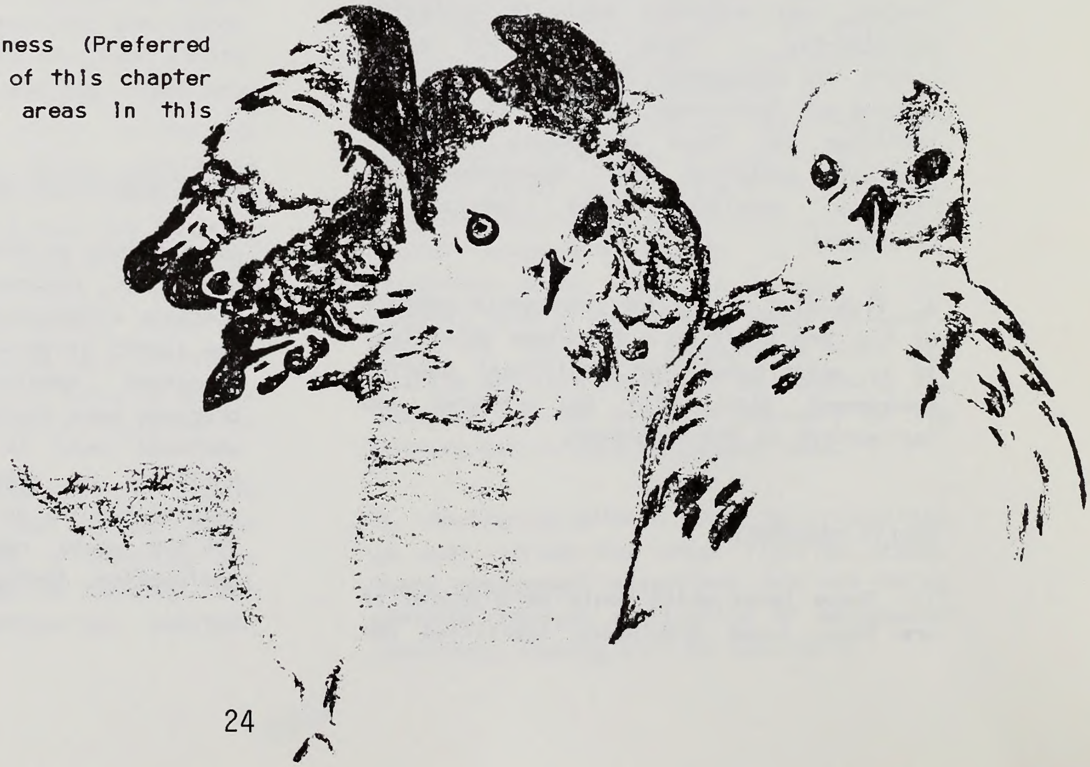
a. Goshute Canyon (NV-040-015) 22,225 suitable acres (13,369 nonsuitable acres) - This would exclude foothill areas possessing manageability problems, areas of high mineral potential, and areas with oil and gas potential.

b. Park Range (NV-040-154) 46,831 suitable acres (437 nonsuitable acres) - This would exclude an area which is a crested wheatgrass seeding;

c. Riorden's Well (NV-040-166) 37,542 suitable acres (19,460 nonsuitable acres) - This would exclude areas of mineralization, high potential for oil and gas, easy ORV access, and a northern portion which has less than high quality wilderness characteristics;

d. South Egan Range (NV-040-168) 0 suitable acres (96,916 nonsuitable acres) - This is excluded due to an intensity of cherrystemmed roads, crested wheatgrass seedings, easy off-road vehicle access, mineralized areas, and private inholdings. There would, however be an 80 acre designated geologic area and a withdrawal from mineral entry within T. 10 N., R. 62 E., sec. 25, NE^{4}E^{2} and T. 10 N., R. 63 E., sec. 30 NW^{4}W^{2}. This surrounds a recently discovered large limestone cave, high in the South Egan Range.

See the Lands and Wilderness (Preferred Alternative) Map at the end of this chapter for recommended wilderness areas in this alternative.



ALTERNATIVE A

Objective

The objective of this alternative is to continue to manage the public land as at present.

Management Actions

RANGELAND MANAGEMENT

1. Livestock grazing levels would continue to be licensed at the three-year average licensed use. This has been 123,461 AUMs. This alternative is the proposed action for livestock grazing.

2. There would be no planned or scheduled range improvement projects, except on a case-by-case basis. Any unplanned or unscheduled projects would be done so as to not substantially alter grazing levels or to implement an allotment management plan. Up to $100,000 could be spent each year on these types of projects.

3. Rangeland monitoring of grazing use for proper utilization and trend would continue. For analysis purposes, it is assumed that no adjustments would be made on the basis of monitoring date.

4. Wild horses would be managed at 1,936 animals in the following herd use areas: Sand Springs, 494; Monte Cristo, 96; Buck and Bald, 1,185; Butte, 60; Cherry Creek, 11; Antelope, 14; Jake's Wash, 20; White River, 20; Diamond Hills, 36. The Monte Cristo Herd Management Area would be managed in accordance with an approved management plan; the remaining herds would be managed at the 1982-83 levels; small portions of the Diamond Hills, Cherry Creek, Antelope, and White River wild horse herds that occur in the Egan Resource Area would be managed by other resource areas (Shoshone-Eureka, Wells, and Schell) containing the bulk of the herds.

5. Existing grazing and monitoring levels would continue on all stream and other riparian areas.

6. The existing policy of complete wild fire supression would continue. There would be no development of fire management plans and fire would be ignored as a resource management tool.

7. Habitat would be managed for existing levels of wildlife species.

REALTY MANAGEMENT

1. Land disposal would be considered on a case-by-case basis.

2. Utility and transportation corridors would not be designated or planned, but rights-of-way applications would be processed on a case-by-case basis.

WILDERNESS STUDY AREAS

1. None of the wilderness study areas would be recommended as suitable for wilderness designation.

ALTERNATIVE B

Objective

The objective of this alternative is the protection and enhancement of natural resource values, with an emphasis on fragile and unique resources, wildlife, wild horses, and wilderness values.

Management Actions

RANGELAND MANAGEMENT

Short-Term Actions (0-5 years)

1. Livestock grazing levels would be adjusted from the current 3-year average licensed use of 123,461 AUMs to 92,308 AUMs. The initial stocking level for livestock would be 92,308 AUMs. This would provide enough forage to help big game reach reasonable numbers. The livestock grazing levels would be 75 percent of the current 3-year averaged licensed use. A breakdown by management zone is as follows:

   a. Zone 1 - adjust livestock levels from 27,738 AUMs to 12,426 AUMs or 45 percent of 3-year average licensed use;

   b. Zone 2 - adjust livestock levels from 43,529 AUMs to 40,629 AUMs or 93 percent of 3-year average licensed use;

   c. Zone 3 - adjust livestock levels from 36,899 AUMs to 25,343 AUMs or 69 percent of 3-year average licensed use;

   d. Zone 4 - adjust livestock levels from 2,822 AUMs to 1,956 AUMs or 69 percent of 3-year average licensed use;

   e. Zone 5 - adjust livestock levels from 12,473 AUMs to 11,954 AUMs or 96 percent of 3-year average licensed use.

2. Range improvement projects would be developed which would have a substantial benefit, in addition to livestock, to wildlife and wild horses. A complete list of projects by zone can be found in Appendix 1. Those projects include:

   a. the developemnt of water facilities and systems, which would include the drilling of ten wells, developing five springs, digging one reservoir, and installing one windmill;

   b. vegetation conversions would include 5,500 acres which would be burned and reseeded and 3,500 acres would only be burned.

3. Rangeland monitoring would continue as in the past, but would be modified by incorporating new studies as necessary. Monitoring studies would be used to determine if adjustments in livestock and wild horse numbers were necessary.

4. Wild horses would be managed at 2,235 animals. The Jake's Wash Herd would be expanded from the existing level of 20 wild horses to 50 animals by relocating 30 wild horses from Telegraph Canyon; the remaining herds would be managed at the 1982-83 levels; and small portions of the Diamond Hills, Cherry Creek, Antelope, and the White River wild horse herds occur in the Egan Resource Area, but would be managed by other resource areas (Shoshone-Eureka, Wells, and Schell) containing the bulk of the herds.

5. Monitoring efforts would be intensified on all stream and other riparian areas. Where management objectives are not being obtained through application of management practices, fencing will be considered.

Riparian protection would be emphasized in wildlife, watershed, and range improvement funding in zones 1 and 3.

6. Wildfires would be suppressed in all riparian areas, key wildlife habitat, or when life or property are endangered. In other areas, prescribed burn plans would be developed which enhance wildlife and wild horse habitats.

7. Habitat would be managed for reasonable numbers of wildlife species. BLM would cooperate with the Nevada Department of Wildlife to reintroduce antelope into historic ranges in all zones and reintroduce elk into zone 3 (Steptoe/Horse and Cattle Camp area).

8. All vegetation would be managed for those successional stages which would best meet the objectives of this alternative. These desired successional stages of vegetation have been identified in Appendix 5. The implementation of grazing systems, construction of range improvements, initial stocking rates, and future adjustments of livestock and wild horse numbers, if necessary, will determine to what extent the desired levels for vegetation management are reached.

Long-Term Actions (5 to 20 years)

1. In the long-term, the range monitoring program would provide data on which to base any future adjustments in grazing. All future adjustments would be designed to achieve the objectives of this alternative. The initial assignment of allotments into the categories of "maintain", "improve", and "custodial" would be evaluated periodically. These evaluations would ensure that grazing systems and range improvements would be initiated for those allotments with the greatest potential for improvement in resource conditions and return on investment.

2. More on-the-ground actions than those identified in the short-term such as vegetation conversion projects, water developments, and boundary and pasture fences may be developed to meet the objectives of the alternative. All riparian and wetland areas would be monitored. Corrective action would be taken to improve these areas where necessary to bring them up to the good condition class. Additional habitat management plans would be developed as needed.

REALTY MANAGEMENT

1. Those lands which would be disposed of are those lands previously identified for disposal and which are not in wildlife habitat or in a wild horse herd management areas. This would amount to disposal of up to 39,555 acres. All land disposal would be done in a planned and orderly manner. A breakdown by management zone is as follows:

a. Zone 1 - dispose of up to 3,840 acres;

b. Zone 2 - dispose of up to 4,721 acres;

c. Zone 3 - dispose of up to 24,858 acres;

d. Zone 4 - dispose of up to 160 acres;

e. Zone 5 - dispose of up to 5,976 acres.

Refer to the Lands and Wilderness (Alternative B) Map at the end of this chapter for the lands identified for potential transfer. It should be noted that, because of the small scale, these maps are for general location only and should not be considered completely accurate.

2. Two utility and transportation corridors would be designated, one running north and south along an existing 69 KV utility line in Steptoe Valley and the other running east and west along an existing 230 KV utility line.

WILDERNESS STUDY AREAS

1. All four wilderness study areas would be recommended in their entirety as suitable for wilderness designation. This would total 236,780 acres recommended as suitable for wilderness designation, including:

a. Goshute Canyon (NV-040-015) - 35,594 suitable acres

b. Park Range (NV-040-154) - 47,268 suitable acres

c. Riordan's Well (NV-040-166) - 57,002 suitable acres

d. South Egan Range (NV-040-168) - 96,996 suitable acres

See the Lands and Wilderness (Alternative B) Map at the end of this chapter for recommended wilderness areas in this alternative.

ALTERNATIVE C

Objective

The objective of this alternative is to provide a wide variety of goods and services to the public, within the sustained use capabilities of the resource area.

Management Actions

RANGELAND MANAGEMENT

Short-Term Actions (0-5 years)

1. Initially authorize livestock use at the 3-year average licensed use, which is 123,461 AUMs. There would be no initial adjustment in preference levels.

2. Range improvement projects would be developed which emphasize the greatest return on investment. Those improvements with the highest benefit/cost ratio would receive priority funding. Only projects with a benefit/cost ratio over 1.0 would be funded. A complete list of projects, by zone, can be found in Appendix 1. These projects include:

    a. the development of water facilities and systems, which would include the drilling of twelve wells, developing five springs, digging one reservoir, eleven miles of pipeline, numerous troughs, and eight guzzlers;

    b. vegetation conversions would include 15,500 acres of burning and seeding, 1,200 acres of seeding, and 3,500 acres of burning.

3. Continue existing rangeland monitoring studies and establish new studies as needed. Total utilization will not exceed proper utilization of key management species.

4. Wild horses would be managed at 1,936 animals. The Monte Cristo Management Area would be managed at 96 animals in accordance with an approved management plan; the remaining herds would be managed at the 1982-83 levels; and small portions of the Diamond Hills, Cherry Creek, Antelope, and the White River wild horse herds occur in the Egan Resource Area, but would be managed by other resource areas (Shoshone-Eureka, Wells, and Schell) containing the bulk of the herds.

5. Monitoring efforts would be intensified on all stream and other riparian areas. Where management objectives are not being obtained through application of management practices, fencing will be considered.

6. A resource area-wide fire management plan would be developed which allows a broad spectrum of uses, depending on the individual situation. Fire would be used as a tool when it is the most effective and efficient way of accomplishing a task.

7. Habitat would be managed for existing levels of wildlife species. Reintroductions of big game species would be accomplished in cooperation with the Nevada Department of Wildlife, where such reintroductions would not conflict with existing uses and sufficient forage is avalable.

8. All vegetation would be managed for those successional stages which would best meet the objectives of this alternative. These desired successional stages of vegetation have been identified in Appendix 5. The implementation of grazing systems, construction of range improvements, initial stocking rates, and future adjustments of livestock and wild horse numbers, if necessary, will determine to what extent the desired levels for vegetation management are reached.

Long-Term Actions (up to 20 years)

1. In the long-term, the range monitoring program would provide data on which to base additional future adjustments in livestock and wild horse grazing and to determine additional improvements.

2. The allotment catagories of maintain, improve, and custodial would be evaluated periodically. These evaluations would assure the management objectives are being reached and that range improvements would be initiated for those allotments with the greatest potential for improvement in resource conditions and return on investment.

3. Providing forage for reasonable numbers of big game would be a long-term objective.

It is anticipated that additional habitat management plans will be prepared and implemented in the long-term.

REALTY MANAGEMENT

1. Those lands which would be disposed of are those lands previously identified for disposal and which do not contain key wild horse habitat. This would amount to disposal of up to 79,888 acres. All land disposal would be done in a planned and orderly manner. A breakdown by management zone is as follows:

a. Zone 1 - dispose of up to 11,620 acres;

b. Zone 2 - dispose of up to 8,669 acres;

c. Zone 3 - dispose of up to 52,199 acres;

d. Zone 4 - dispose of up to 380 acres;

e. Zone 5 - dispose of up to 7,020 acres;

Refer to the Lands and Wilderness (Alternative C) Map at the end of this chapter for the lands identified for potential transfer. It should be noted that, because of the small scale, these maps are for general location only and should not be considered completely accurate.

2. Two utility and transportation corridors would be designated, one running north and south, and one running east and west. Three others would be planned, two running north and south, and one running east and west.

WILDERNESS STUDY AREAS

1. Portions of all four wilderness study areas would be recommended as suitable for wilderness designation. All acreage was recommended suitable which did not have important existing resource conflicts or major manageability problems; or important combinations of existing lesser conflicts and/or problems. All portions of all areas were considered to have sufficient wilderness quality for designation. Only portions with the most unnatural features were eliminated, and this was done in combination with existing resource conflicts or manageability problems. This would total 165,202 acres recommended as suitable for wilderness designation including:

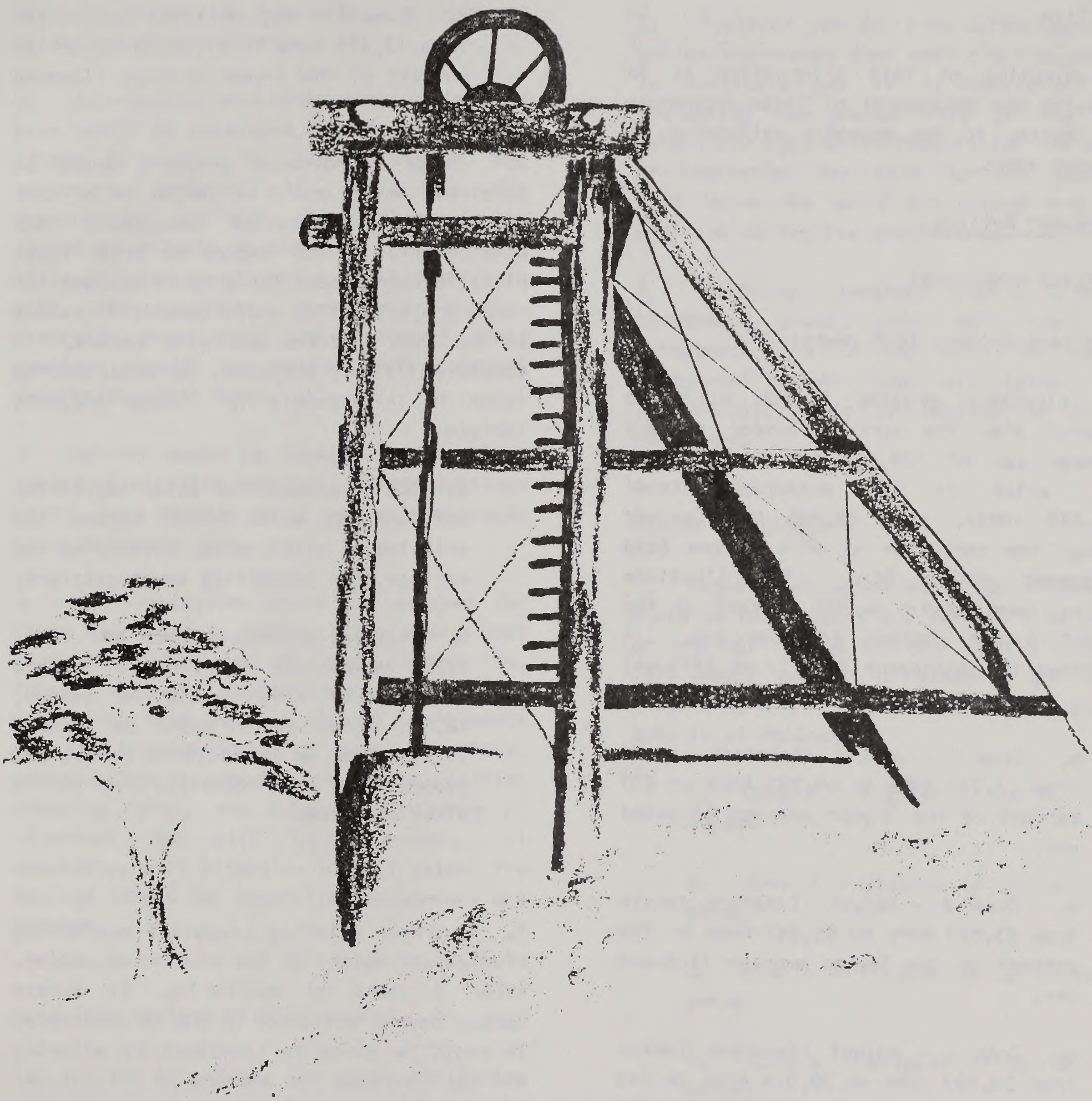
a. Goshute Canyon (NV-040-015) 26,436 suitable acres (9,158 nonsuitable acres) - This would exclude foothill areas possessing manageability problems, areas of high mineral potential, and areas with oil and gas potential;

b. Park Range (NV-040-154) 38,573 suitable acres (8,695 nonsuitable acres) - This would exclude a portion of a crested wheatgrass seeding, an area of moderate geothermal potential, and an area of easy off-road vehicle access;

c. Riordan's Well (NV-040-166) 42,493 suitable acres (11,211 nonsuitable acres) - This would exclude an area of mineralization, high potential oil and gas area, and an area of easy off road vehicle access;

d. South Egan Range (NV-040-168) 57,660 suitable acres (39,256 nonsuitable acres) - This would exclude an area of high intensity cherrystemmed routes, crested wheatgrass seedings, easy off road vehicle access, an unmanageable appendage, and a mineralized area.

See the Lands and Wilderness (Alternative C) Map at the end of this chapter for recommended wilderness areas in this alternative.



ALTERNATIVE D

Objective

The objective of this alternative is to emphasize the management of those resources contributing to the economic well-being of resource users.

Management Actions

RANGELAND MANAGEMENT

Short-term Actions (0-5 years)

1. Livestock grazing levels would be adjusted from the current 3-year average licensed use of 123,461 AUMs to 236,316 AUMs, which is the preference level (216,348 AUMs), plus 19,968 AUMs gained through the reduction of wild horses (see management action #4). The livestock grazing level would be 191 percent of the current 3-year average licensed use. A breakdown by management zone is as follows:

   a. Zone 1 - adjust livestock levels from 27,738 AUMs to 65,785 AUMs or 237 percent of the 3-year average licensed use;

   b. Zone 2 - adjust livestock levels from 43,529 AUMs to 89,547 AUMs or 205 percent of the 3-year average licensed use;

   c. Zone 3 - adjust livestock levels from 36,899 AUMs to 58,014 AUMs or 149 percent of the 3-year average licensed use;

   d. Zone 4 - adjust livestock levels from 2,822 AUMs to 7,606 AUMs or 270 percent of the 3-year average licensed use;

   e. Zone 5 - adjust livestock levels from 12,473 AUMs to 15,364 AUMs or 123 percent of the 3-year average licensed use.

2. Range improvement projects would be developed which would be judged to be most essential to livestock management and enhancement, without regard to other uses. Wildlife improvement funds would be used for those projects which would benefit livestock as well as wildlife and wild horses. A complete list of projects, by zone, can be found in in Appendix 1. Those projects include:

   a. The development of water facilities and systems, which would include the drilling of eight wells, developing ten springs, and installing seven guzzlers;

   b. vegetation conversions and livestock management tools would include 2,500 acres which would be seeded, 18,940 acres which would be burned, 17,070 acres which would be burned and seeded, and the construction of 70 miles of fence.

3. Continue existing rangeland monitoring studies and establish new studies as needed. After 5 years of monitoring, if excess forage beyond sustained yield is available, it would be given to livestock by allowing for an increase in numbers of livestock. Total utilization will not exceed proper utilization of key management species.

4. Wild horses would be managed at 347 animals, which is 50 animals per herd management area, except the Monte Cristo Herd Management Area would be managed at 96

animals in accordance with an approved management plan and the Jake's Wash Herd would be managed at 20 animals which is the existing number.

5. Existing monitoring efforts would continue on all stream and other riparian areas. Consideration would be given to reduce impacts brought about from projects on riparian areas. Grazing systems and range improvement projects would be implemented if noticeable gains would be made by livestock interests, as well as gains to riparian areas.

6. A resource area-wide fire management plan would be developed, which would allow fires to burn in pinyon-juniper and sagebrush ecotypes if conditions for prescription are met, where there is no threat to private or historic structures or life, and when such burning is in accordance with the woodland management policy. Generally areas which could support grass seedings would be seeded with crested wheatgrass after burns.

7. Habitat would be managed for existing levels of wildlife species. Reintroductions of big game species would not be encouraged or supported by BLM.

8. All vegetation would be managed for those successional stages which would best meet the objectives of this alternative. These desired successional stages of vegetation have been identified in Appendix 5. The implementation of grazing systems, construction of range improvements, initial stocking rates, and future adjustments of livestock and wild horse numbers, if necessary, will determine to what extent the desired levels for vegetation management are reached.

Long-Term Actions (5 to 20 years)

1. In the long-term, the range monitoring programs would provide data on which to base additional adjustments in livestock and wild horse grazing and range improvements. All future adjustments and improvements would be designed to achieve the objectives of this alternative.

2. The initial assignment of allotments into the categories of "Maintain," "Improve", and "Custodial" would be evaluated periodically. These evaluations would assure that the management objectives are being reached. Allotment Management Plans and range improvements would be initiated for those allotments with the greatest potential for improvement in resource conditions and return on investment.

3. Livestock use would be authorized above active preference when sufficient vegetation is available and it is consistent with protecting the productivity of the soil, water, and vegetation resources. The amount of vegetation available for big game and wild horse use would not change from that provided during the short-term.

4. Additional livestock grazing allotment management plans, wild horse herd area management plans, and wildlife habitat management plans and associated range improvements would be implemented in the long-term.

REALTY MANAGEMENT

1. Those lands which would be disposed of would be lands which are difficult to manage or are not needed for any federal program. This would amount to disposal of up to 113,479 acres. A breakdown by management zone is as follows:

a. Zone 1 - dispose of up to 16,870 acres;

b. Zone 1 - dispose of up to 21,519 acres;

c. Zone 3 - dispose of up to 66,985 acres;

d. Zone 4 - dispose of up to 1,020 acres;

e. Zone 5 - dispose of up to 7,085 acres.

Refer to the Lands and Wilderness (Alternative D) Map at the end of this chapter for the lands identified for potential transfer. It should be noted that, because of the small scale, these maps are for general location only and should not be considered completely accurate.

2. Utility and transportation corridors would be designated and planned in conjunction with the Western Regional Corridor Study and where utility companies have indicated an interest or need.

WILDERNESS STUDY AREAS

1. Portions of three wilderness study areas would be recommended as suitable for wilderness designation. All acreage was recommended as suitable which had good to high quality wilderness characteristics, and which did not have important existing or potential resource conflicts or manageability problems; or important combinations of lesser existing or potential conflicts or problems. This would total 80,965 acres recommended as suitable for wilderness designation, including:

a. Goshute Canyon (NV-040-015) 0 suitable acres (35,594 nonsuitable acres) - This would exclude the entire area, since conflicts with minerals and potential oil and gas activity would leave a 1-mile wide strip of land,which would be difficult to manage.

b. Park Range (NV-040-154) 34,042 suitable acres (13,226 nonsuitable acres) - In addition to the exclusions listed in Alternative C, this would exclude an addition area of geothermal potential, with less than high wilderness values, and relatively easy off-road vehicle access;

c. Riordan's Well (NV-040-166) 30,363 suitable acres (26,639 nonsuitable acres) - In addition to the exclusions listed in Alternative C, this would exclude additional areas with moderate mineral potential lower quality characteristics, cherrystemmed routes, and relatively easy off-road vehicle access;

d. South Egan Range (NV-040-168) 16,560 suitable acres (80,356 nonsuitable acres) - In addition to the exclusions listed in Alternative C, this would exclude areas with a combination of cherrystemmed roads, speculative mineral potential, ease of off-road vehicle access, private lands, lower quality wilderness characteristics, and oil and gas potential.

See the Lands and Wilderness (Alternative D) Map at the end of this chapter for recommended wilderness areas in this alternative.

ALTERNATIVE E

Objective

The objective of this alternative is the protection and enhancement of natural resource values.

Management Actions

RANGELAND MANAGEMENT

Short-Term Actions (0-5 years)

1. Livestock grazing would be excluded on all public lands within the Egan Resource Area. This would provide enough forage to help big game reach reasonable numbers.

2. Range improvement projects would be developed which would have a substantial benefit to wildlife and wild horses. A complete list of projects by zone can be found in Appendix 1. Those projects include:

   a. the developemnt of water facilities would include developing one spring and one guzzler.

3. Rangeland monitoring would continue, but would be modified by incorporating new studies as necessary. Monitoring studies would be used to determine if adjustments in wild horse numbers were necessary.

4. Wild horses would be managed at 2,205 animals. The Jake's Wash Herd would be expanded from the existing level of 20 wild horses to 50 animals by relocating 30 wild horses from Telegraph Canyon; the remaining herds would be managed at the 1982-83 levels; and small portions of the Diamond Hills, Cherry Creek, Antelope, and the White River wild horse herds occur in the Egan Resource Area, but would be managed by other resource areas (Shoshone-Eureka, Wells, and Schell) containing the bulk of the herds.

5. Monitoring efforts would continue on all stream and other riparian areas. Riparian protection would be emphasized in wildlife, and watershed funding in zones 1 and 3.

6. Wildfires would be suppressed in all riparian areas, key wildlife habitat, or when life or property are endangered. In other areas, prescribed burn plans would be developed which enhance wildlife and wild horse habitats.

7. Habitat would be managed for reasonable numbers of wildlife species. BLM would cooperate with the Nevada Department of Wildlife to reintroduce antelope into historic ranges in all zones and reintroduce elk into zone 3.

8. All vegetation would be managed for those successional stages which would best meet the objectives of this alternative. These desired successional stages of vegetation have been identified in Appendix 5. The implementation of grazing systems, construction of range improvements, initial stocking rates, and future adjustments of livestock and wild horse numbers, if necessary, will determine to what extent the desired levels for vegetation management are reached.

Long-Term Actions (5 to 20 years)

1. In the long-term, the range monitoring program would provide data on which to base any future adjustments in wild horses. All future adjustments would be designed to achieve the objectives of this alternative. The initial assignment of allotments into the categories of "maintain", "improve", and "custodial" would be evaluated periodically.

REALTY MANAGEMENT

1. Those lands which would be disposed of are those lands previously identified for disposal and which are not in wildlife habitat or in a wild horse herd management areas. This would amount to disposal of up to 39,555 acres. All land disposal would be done in a planned and orderly manner. A breakdown by management zone is as follows:

a. Zone 1 - dispose of up to 3,840 acres;

b. Zone 2 - dispose of up to 4,721 acres;

c. Zone 3 - dispose of up to 24,858 acres;

d. Zone 4 - dispose of up to 160 acres;

e. Zone 5 - dispose of up to 5,976 acres.

Refer to the Lands and Wilderness (Alternative E) Map at the end of this chapter for the lands identified for potential transfer. It should be noted that, because of the small scale, these maps are for general location only and should not be considered completely accurate.

2. Two utility and transportation corridors would be designated, one running north and south along an existing 69 KV utility line in Steptoe Valley and the other running east and west along an existing 230 KV utility line.

WILDERNESS STUDY AREAS

1. All four wilderness study areas would be recommended in their entirety as suitable for wilderness designation. This would total 236,780 acres recommended as suitable for wilderness designation, including:

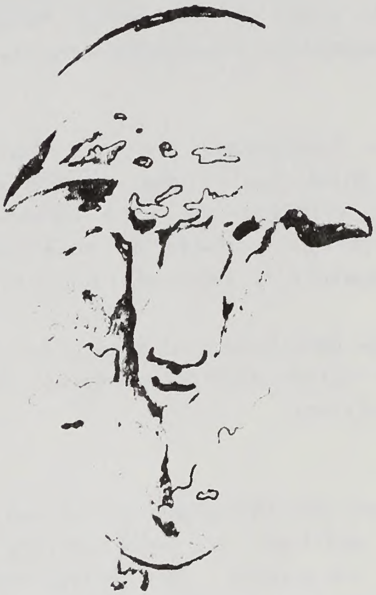
a. Goshute Canyon (NV-040-015) - 35,594 suitable acres

b. Park Range (NV-040-154) - 47,268 suitable acres

c. Riordan's Well (NV-040-166) - 57,002 suitable acres

d. South Egan Range (NV-040-168) - 96,996 suitable acres

See the Lands and Wilderness (Alternative E) Map at the end of this chapter for recommended wilderness areas in this alternative.



IMPLEMENTATION OF THE RESOURCE MANAGEMENT PLAN

INTRODUCTION

The selection of the final resource management plan will take place subsequent to a review of the public comments submitted in response to the draft plan. The final plan may consist of one of the alternatives presented in this document or it may be a combination of several of the alternatives. After publication of the final environmental impact statement, management decisions will be documented in a record of decision published in the Federal Register.

The resource management plan will be implemented through activity plans such as allotment management plans, wildlife habitat management plans, and wild horse herd management area plans. These plans will identify such details as the grazing system to be used in an allotment management plan, the location of range improvements for the benefit of livestock, and wild horses and wildlife. The management actions developed for these plans will be integrated into a total management program designed to assure progress towards meeting the objectives of the resource management plan. Additional implementation guidelines that apply to the alternatives are discussed below.

Implementation of the resource management plan will take place through coordination, consultation, and cooperation. Coordinated resource management and planning is an advisory process that brings together all interests concerned with the management of resources in a given local area (landowners, land management agencies, wildlife groups, wild horse groups, and conservation organizations) and is the recommended public process through which consultation and coordination will take place. Grazing adjustments, if required, will be based upon reliable vegetation monitoring studies, consultation and coordination, inventory, or a combination of these sources.

WILDERNESS

All wilderness study areas will continue to be protected under the Bureau's Interim Management Policy and Guidelines for Lands Under Wilderness Review. Wilderness recommendations made in the final environmental impact statement for the resource management plan are preliminary and subject to change during administrative review. A separate final legislative environmental impact statement will be prepared for the wilderness study recommendations. A wilderness study report will also be written that addresses each area individually. After review of these documents, the Director of the Bureau of Land Management would request mineral surveys by the United States Geological Survey and Bureau of Mines for each area recommended as preliminarily suitable. The Federal Land Policy and Management Act of 1976 requires the Secretary of the Interior to review areas of the public lands determined to have wilderness characteristics, and to report to the President by October 21, 1991 his recommendations as to the suitability or nonsuitability of each such area for preservation as wilderness. The President is required to report his recommendations to Congress by October 21, 1993.

Areas designated as wilderness by Congress will be managed under the Bureau's Wilderness Management Policy. Areas designated as wilderness will be designated "closed" to off-road vehicles under the authority of executive order numbers 11644 and 11989 and the Wilderness Act of 1964 except if such use takes place as part of a valid existing right or if authorized in the wilderness management plan for the area.

LAND TENURE ADJUSTMENTS

All land disposal actions proposed are discretionary. Actual disposal could be at the initiative of the bureau or in response to expressions of interest from non-bureau individuals and entities. Proposed land tenure adjustments will be evaluated through the environmental analysis process to determine if the action is consistent with the objectives of the plan. The decision to dispose of a particular parcel will consider conflicts identified in required cultural resource and mineral reports. Unsurveyed lands will be surveyed prior to disposal.

UTILITY CORRIDORS

Utility corridors which include existing transmission lines will be designated. Planning corridors will be identified where no transmission lines exist. Designation and identification of corridors will follow bureau procedures and will be made on a point-to-point basis within specified valleys. The actual route will be established after environmental analysis is completed for the right-of-way. Each corridor will be five miles wide to provide opportunities for multiple transmission facilities and selection of routes that minimize environmental degradation in a cost-effective manner. Where utility lines are in existence, the width of the corridor will encompass existing rights-of-way and be located to avoid sensitive resources where appropriate. Applicants for use of a corridor will be required to locate new facilities proximate to existing facilities except where considerations of construction feasibility, cost, resource protection or safety are over-riding.

LIVESTOCK USE, WILD HORSE USE, AND WILDLIFE HABITAT MANAGEMENT

Wild Horses

The management of wild horses will be coordinated through wild horse herd management area plans. Wild horses will not be maintained outside of 1971 use areas. While it is recognized that some wild horses may drift outside these areas, management will be designed to minimize such drift.

Wildlife

The development of wildlife habitat improvement projects will be guided by wildlife habitat management plans. The development of plans will be closely coordinated with the implementation of allotment management plans to meet the objectives of both programs. Wildlife habitat management plans will address four major themes: management of crucial habitats to provide for threatened, endangered, or sensitive species where present; management of big game ranges to provide habitat for reasonable numbers of animals over the long term; improvement of riparian, wetland, and aquatic habitats; and management of other habitats to meet needs of upland game and nongame animals.

Riparian and aquatic habitat improvement measures could include managing livestock through grazing systems consistent with maintaining riparian vegetation in optimum condition, pasture fencing, or fencing areas to exclude livestock and wild horses. Whether to use protective fencing, grazing systems, some other appropriate measure, or a combination of methods will be determined on an individual basis for each stream or riparian area.

Livestock

Livestock grazing allotment management plans will include one or more of the grazing treatments described below. The grazing treatments will be designed to provide forage for consumptive use while maintaining proper and judicious use levels for key forage species.

Grazing systems would include one or more of the following treatments in combination.

Treatment 1: Rest from livestock grazing for two consecutive growing seasons (approximately May 1 of one year to August 31 of the following year). Two growing seasons of rest would allow key management species to improve vigor and increase litter accumulation, seed production, and seeding establishment.

Treatment 2: Rest from livestock grazing for at least 1 year in both the spring (April 1 to May 30) and summer (June 1 to September 1) during each 3- or 4-year cycle.

Treatment 3: Graze each pasture at some time during each grazing year.

Treatment 4: Graze no pasture more than twice in the same growing season (spring or summer) during any 3- or 4-year cycle.

Treatment 5: Graze livestock to late fall only (approximately July 16 to November 15), and rest during the spring or summer the following year to improve the vigor, density, and reproduction of key grass species.

Treatment 6: Provide rest from livestock grazing for 2 years until seedlings are established or until it is determined that vegetation manipulation or recovery project is unsuccessful. This treatment provides the protection necessary for establishment or recovery of key management species following wildfire, prescribed burning, and seeding or spraying project.

Treatment 7: Defer livestock grazing from early spring to midsummer each year (Approximately April 1 to June 30). Improved vigor and reproduction for key management species in each allotment would result.

Treatment 8: Allow grazing on winterfat/nuttall saltbrush up to 80 percent utilization during the dormant period (approximately November 1 to March 1), and rest from grazing March 1 to October 31 each year.

Specific Implementation Procedures

A rangeland program summary will be issued within five months of the completion date of the Resource Management Plan to inform livestock grazing permittees and interested publics about the implementation of the rangeland management program.

The Rangeland Program Summary explains the procedure involved in establishing initial and subsequent levels of livestock grazing use. Grazing decisions and agreements will be issued as part of the Rangeland Program Summary and will include either initial livestock grazing use levels or will identify the data needed and the procedures to be used in determining future adjustments.

Range management actions for livestock use and wild horse numbers will be based upon data obtained through the monitoring program and will consider recommendations made through the coordinated resource management and planning process. Actions could include, but will not be limited to, change in seasons-of-use, change in livestock numbers, correction of livestock distribution problems, alteration of the number of wild horses, development of range improvements, and taking site-specific measures to achieve improvements in wildlife habitat.

The implementation strategy for the management actions identified in Table 2-1 related to livestock grazing allotments will be dependent on, and prioritized according to, the selective management category of the allotments.

EGAN RESOURCE MANAGEMENT PLAN

Table 2-1

PRORITY OF IMPLEMENTATION
ACTION BY ALLOTMENT CATEGORY

Implementation Action	Category	Allotment Priority
Fund rangeland improvements with appropriated funds	M	2
	I	1
	C	3
Develop allotment management plans	M	2
	I	1
	C	3
Use supervision	M	3
	I	1
	C	2

SELECTIVE MANAGEMENT

It is the policy of the Bureau of Land Management to address rangeland management problems through a selective management approach. The bureau has developed three categories into which allotments will be grouped according to their resource needs and potential for improvement. The names and objectives of the three categories are: 1) maintain the current satisfactory condition; 2) improve the current unsatisfactory condition; and 3) manage in a custodial fashion.

The implementation of intensive grazing management will be accomplished through livestock grazing allotment management plans. Allotments in the "improve" category will be given first priority for development of plans to resolve indentified problems. All range improvement projects proposed in this document are for "improve" category allotments. Second priority for livestock grazing allotment management plan development will be given to "maintain" category allotments and third priority will be assigned to "custodial" category allotments. Although range improvements are not proposed on second and third priority allotments in this resource management plan, some minor rangeland improvements may be developed as the need arises.

The potential for improvement of each allotment has been determined by estimating its present range condition and analyzing its resource potential, presence of user conflicts, opportunity for positive economic return, and present management. A complete listing of the specific criteria used to evaluate the Egan Resource Area's grazing allotments appears in Appendix 2.

The initial allotment categorizations shown in Appendix 3 are subject to change. Allotments may be placed into different categories in the future as allotment evaluation shows changed conditions.

THE RANGELAND MONITORING PROGRAM

A rangeland monitoring system was initiated in the Egan Resource Area during 1982. The purpose of the program is to provide management with reliable data to determine if livestock, wild horse, and wildlife management actions are meeting resource management objectives. It incorporates approved methods in the 1981 Range Studies Task Group monitoring procedures (Range Studies Task Group, 1981,). The vegetation monitoring system being used includes:

Utilization: BLM uses the Key Forage Plant Method--an occular estimate for judging utilization of key species by weight. In this method, the examiner divides noticeable utilization among six classes of use within a key management area; no-use (0 percent), slight (1-20 percent), light (21-40 percent), moderate (41-60 percent), heavy 61-80 percent), and severe (81-100 percent).

Grazing areas would be managed for an annual utilization of 55 percent for perennial grasses and forbs and 45 percent for shrubs.

Actual Use: Livestock operators will provide records of actual livestock use. Use of the range by wild horses will be determined through census figures, with refinement made by season-of-use data as available. Actual use and season-of-use by big game animals will be determined in cooperation with the Nevada Department of Wildlife.

Climatic Data: Annual precipitation and length of growing season have a marked influence on seasonal vegetation growth and production. Official weather stations and Bureau of Land Management and Nevada State climatic stations will provide the climatic data. This data will be used to correlate seasonal weather to plant growth throughout the resource area as determined in the utilization and trend studies.

Trend: Trend is the direction of change in condition of the range observed over time. Changes in trend are categorized as upward, downward, or not apparent. From three to five years of observation are needed before any trend can be detected on most range sites. Trend is measured by using several methods, primarily by noting changes in the frequency of key species in key areas over time, using the Quadrat Frequency Method. Additional monitoring will be conducted in crucial wildlife and wild horse areas. Information gained through these efforts and other studies will be used in making any grazing decisions. For more detailed information on these monitoring procedures, refer to the 1981 Final Nevada Range Monitoring Procedures (Range Studies Task Group, 1981), the draft Bureau Monitoring Studies Manual (USDI, BLM) and the Nevada Wildlife Manual Supplement 6630 (USDI, BLM, Aug. 1982).

The monitoring program for those allotments in the "maintain" and "custodial" categories will be of low intensity. For the "improve" category allotments, monitoring intensity will be variable, focusing on the effects of management actions on range condition. The monitoring program will be an integral part of all the alternatives analyzed in this environmental impact statement except the no action alternative.

Appropriations

Implementation of the resource management plan is dependent upon the availability of adequate funding and manpower. All management actions proposed under this plan, with the exception of wild horse gatherings, could be implemented if the current level of funding and manpower is maintained.

Estimated Cost of Implementation for Rangeland Management

Costs of implementation are difficult to determine, given the fact that information on miles of fence, acres of seeding, etc., is somewhat conjectural at this point. Nevertheless, the costs of implementing the Rangeland Management issue by alternative has been estimated, using the best information currently available. These costs are presented in Table 2-2.

Generally these funding levels are based on historic or realistic estimations of funding. The Resource Area has historically received about $100,000 per year in range projects (8100) funding and about $12,000 per year in wildlife funding (4350). These figures were used for Alternatives 'A' and 'C'. Since livestock AUMs are being reduced by 23 percent in Alternative 'B' and range project funds are dependent on receipts from grazing licenses, this alternative's range project funding was reduced to 77 percent of existing levels. Funding was similarly increased for Alternative 'D' since livestock use is expected to increase by 92 percent. The Egan Resource Area has not historically received funding from the wild horse program (4321) for range improvements. An estimated $6,000 per year, however, has been estimated as reasonable for funding from this source in Alternatives 'B', 'C' and 'D'. Similarly, $10,000 per year was forecast as reasonable for watershed developments in these alternatives.

STANDARD OPERATING PROCEDURES

Certain requirements are inherent in the implementation of any Federal action on the public lands. These requirements, or Standard Operating Procedures, are designated to mitigate impacts stemming from management objectives or the construction of support facilities necessary to implement any Federal Act.

The following will be applied to any action resulting from the planning system. These requirements will be part of the standard analysis process.

1. Environmental assessment will be conducted before project development so that, depending on impact, modification or abandonment of the project may be considered.

2. Compliance with wilderness directives on proposed projects will be in accordance with Section 603 (a) of the Federal Land Policy and Management Act (1976), which provides that until Congress acts on Wilderness Study Areas or on lands still under wilderness review, the folowing policy shall prevail: Existing multiple-use activities, including grazing, will continue, but new or expanded existing uses will be allowed only if the impacts would not impair the area's suitability for designation as wilderness. Proposed uses and projects will be analyzed on a case-by-case basis to assure compliance with the Interim Management Policy and Guidelines for Lands Under Wilderness Review. After designation the areas will be managed in accordance with the wilderness management plan developed for each area and with the Wilderness Management Policy.

3. Threatened or endangered plant or animal species clearance is required before implementation of any project. Consultation with the Fish and Wildlife Service per Section 7 of the Endangered Species Act is necessary if a threatened or endangered species or their habitat may be impracted. If there is deemed to be an adverse impact, either special design relocation or abandonment of the project will follow.

4. Cultural resource protection required compliance with Section 106 of the National Historic Preservation Act of 1966, Section 2(b) of Executive Order 11593, and Section 101(b)(4) of the National Environmental Policy Act (NEPA) of 1969. Prior to project approval, intensive field (Class III) inventories will be conducted in specific areas that would be impacted by implementing activities. If cultural or paleontological sites are found, every effort will be made

EGAN RESOURCE MANAGEMENT PLAN
TABLE 2-2
COSTS OF ALTERNATIVES

Alternative	Preferred	A	B	C	D
Livestock Range Improvements	494,225	100,000	347,455	494,225	995,500
Wildlife Habitat Improvements	60,000	12,000	104,600	60,000	120,000
Watershed Improvements Riparian Rehabilitation	30,000	0	30,000	30,000	30,000
Wild Horse Improvements	30,000	0	30,000	30,000	30,000
Total	614,225	112,000	512,055	614,225	1,175,500

Note:

The costs for this table apply to the Rangeland Management issue only. Does not include BLM overhead costs for environmental assessment preparation, contract preparation and supervision, etc.

Alternative A - dollar figures represent current funding. The remaining columns are 5-year totals.

AVAILABLE FUNDING FOR RANGELAND MANAGEMENT
SHORT TERM

Preferred	A	B	C	D	E
$640,000	N/A	$525,000	$640,000	1,100,000	0

to avoid adverse impacts. However, where that is not possible, BLM will consult with the State Historic Preservation Officer and the Advisory Council on Historic Preservation, in accordance with the Programmatic Memorandum of Agreement by and between the BLM and the Council dated January 14, 1980. This agreement sets forth a procedure for developing appropriate mitigative measures to lessen the impact of adverse effects.

5. Visual resource management requires all actions to be in compliance with BLM Visual Resource Management Design Procedures in BLM Manual 8400. On any project which has a visual contrast rating that exceeds the recommended maximum for the visual class zone in which it is proposed, the visual contrasts will be considered significant and mitigating measures must be examined. The ultimate decision as to whether mitigating measures must be implemented or not rests with the District Manager and will be made on a project-by-project basis.

6. Areas of critical environmental concern will receive priority designation and protection during the land use planning process per Sections 201 and 202 of the Federal Land Policy and Management Act.

7. Deferral of livestock use will be in effect for a minimum of two growing seasons following brush control projects so vegetation may be reestablished.

This may require a temporary nonuse agreement with the rancher involved to suspend part of the use in the allotment until the vegetation can be properly managed for grazing.

8. Only the minimal clearing of vegetation will be allowed on project sites requiring excavation.

9. Vegetation conversion that would alter the potential natural plant composition will not be allowed in riparian areas now or in the future.

10. Alteration of sagebrush areas either through application of herbicides, prescribed burning, or by mechanical means will be in accordance with procedures specified in the Memorandum of Understanding between the Nevada Department of Wildlife and Bureau of Land Management relating to the Western States Sage Grouse Guidelines.

11. Active raptor nests adjacent to areas proposed for vegetation manipulation will be protected. On-the-ground work will be confined to the period preceding nesting activity or after the young have fledged (left the nest). Areas containing suitable nesting habitat will be inventoried for active raptor nests prior to initiation of any project.

12. Soils inventories will be completed prior to planning vegetation type conversions to determine land treatment feasibility.

13. Fire management plans will be developed before any prescribed burning occurs on any native vegetation.

14. Project area cleanup will be accomplished by removing all refuse to a sanitary landfill.

15. Fence construction must comply with BLM Manual 1737. Lay-down fences will be constructed in wildlife and wild horse areas if necessary and feasible. Fences in wild horse areas will contrast enough with surroundings so as to be visible to horses and will have gates installed at least once every mile and at all corners.

16. Spring developments will be fenced to prevent overgrazing and trampling of adjacent vegetation and provide escape areas for small wildlife. Water at these spring developments will be maintained at the source.

17. Physiological requirements for the management of different vegetation types will be determined by BLM based on the best available scientific information. Methods of management to meet these requirements will be determined through consultation with and recommendations from the Coordinated Resource Management and Planning (CRMP) Committee.

18. Water for wildlife and wild horses is to be made available in allotments and rested pastures, whenever feasible.

19. All past and future livestock water improvement sites will have wildlife escape devices (bird ramps) in watering troughs, lateral watering sites off pipelines, and the overflow piped away from the last trough so as to provide water at ground level for wildlife.

20. When required, excess wild horses will be removed from public lands and put in custody of individuals, organizations, or other government agencies. Field destruction of wild horses or burros will be made only with appropriate authorization, including cases of sick or lame animals.

21. Water availability will be ascertained by well site investigation before water well development. The investigation will involve a detailed hydrogeological study of the site to determine groundwater availability.

22. Vegetative conversions that require herbicides will be accomplished in accordance with Washington Office Instruction Memorandum 81-135 and Department Manual 517 with regards to safety and application.

23. Applications for commercial or competitive special recreation permits will be analyzed through the environmental assessment process to determine what impacts may occur. These potential impacts will then be weighed against resource values to determine whether or not the special recreation permits will be authorized.

24. Time of day and/or time of year restrictions will be utilized in those areas where construction activities associated with transmission and utility facilities are in the immediate vicinity or would cross sage grouse strutting nesting and wintering grounds; critical mule deer and pronghorn antelope winter range; or antelope kidding areas. The restrictions are listed below.

Restrictions -

Sage grouse strutting gounds: From March 1 to May 15 -- 2 hours before dawn until 10 a.m.

Sage grouse nesting grounds: Late May to mid-June.

Sage grouse wintering grounds: Novemer 1 to March 31.

Critical mule deer and antelope winter range: November 1 to March 31.

Critical pronghorn antelope kidding areas: May 1 to June 30.

25. The Wilderness Study Areas contain 236,860 acres, of which 97,316 acres (41%) are outside of the resource area. For purposes of analysis, impacts to resources are being analyzed according to the total Egan Wilderness Study Area acreage in relation to the total Egan Resource Area acreage.

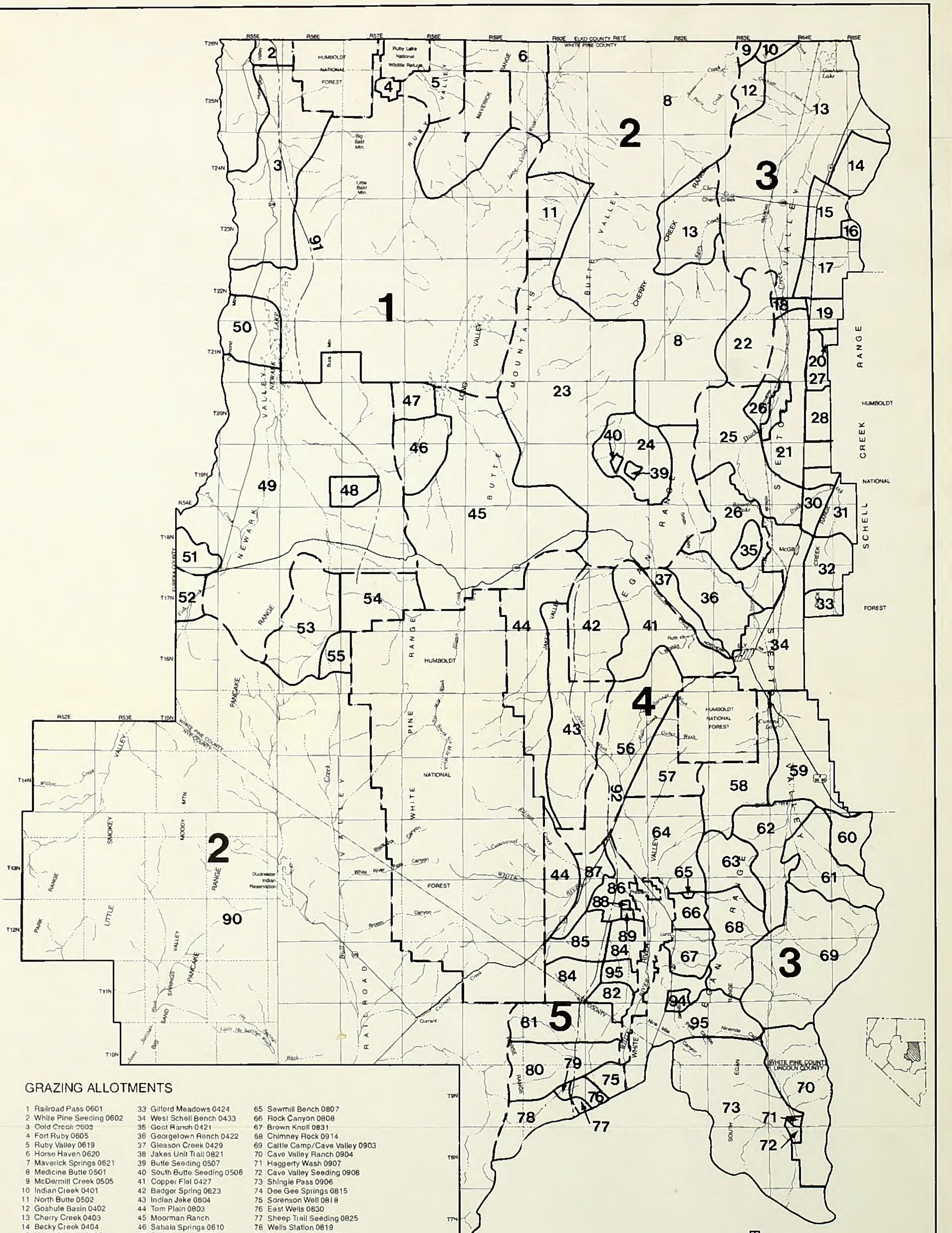
26. Pending the development of a management plan for the 34,560 acre Sunshine Locality National Register District (Federal Register, March 7, 1978), any project which may affect the Sunshine Locality will be subject to the review and consultation procedures authorized in Section 106 of the National Historic Preservation Act of 1966 and as required in the Code of Federal Regulations (36 CFR 800).

27. No surface disturbance is to take place within the 1/2 mile buffer zone on either side of the Pony Express Route. Exploratory drilling for oil, gas, and geothermal will be the only exception allowed, with rehabilitation required upon completion.

28. Prior to the approval of a project which may harm or destroy any Native American religious or cultural sites the affected Native American tribes or organizations will be contacted for their input as required by the American Indian Religous Freedom Act of 1978.

29. Environmental analyses, including categorical exclusions, will be conducted prior to implementing any management-level plans (AMPs, HMPs, WHMPs, etc.) or carrying out any specific projects (fences, spring developments, seedings, etc.).

30. Precede any vegetation conversion in pinyon-juniper areas with commercial firewood and post sales. Any material not sold would be available for free use by individuals up until the conversion.



GRAZING ALLOTMENTS

1	Railroad Pass	0601
2	White Pine Seeding	0602
3	Cold Creek	0603
4	Fort Ruby	0605
5	Ruby Valley	0619
6	Horse Haven	0620
7	Maverick Springs	0621
8	Medicine Butte	0501
9	McDermitt Creek	0505
10	Indian Creek	0401
11	North Butte	0502
12	Goshute Basin	0402
13	Cherry Creek	0403
14	Becky Creek	0404
15	North Steptoe	0405
16	Lovell Peak	0406
17	Shellbourne	0407
18	Middle Steptoe	0411
19	Whiteman Creek	0408
20	Bennett Creek	0409
21	Duck Creek Flat	0412
22	Gold Canyon	0413
23	Thirty Mile Spring	0503
24	South Butte	0504
25	Steptoe	0415
26	Heusser Mountain	0416
27	Big Indian Creek	0410
28	Second Creek	0417
29	Gallagher Gap	0418
30	Schoolhouse Spring	0420
31	Duckcreek Basin	0419
32	Duckcreek	0423
33	Gilford Meadows	0424
34	West Schell Bench	0433
35	Goat Ranch	0421
36	Georgetown Ranch	0422
37	Gleason Creek	0429
38	Jakes Unit Trail	0821
39	Butte Seeding	0507
40	South Butte Seeding	0506
41	Copper Flat	0427
42	Badger Spring	0623
43	Indian Jake	0804
44	Tom Plain	0803
45	Moorman Ranch	
46	Sabala Springs	0610
47	Dry Mountain	0609
48	North Pancake	0612
49	Newark	0608
50	Strawberry	0607
51	Silverado	0623
52	Black Point	0617
53	South Pancake	0615
54	Six Mile	0613
55	Monte Cristo	0614
56	Giroux Wash	0826
57	Dark Peak	0827
58	Lake Area	0910
59	Tamberlain	0901
60	Cold Spring	0909
61	Willow Springs	0129
62	White Rock	0902
63	Little White Rock	0913
64	White Rock	0902
65	Sawmill Bench	0807
66	Rock Canyon	0808
67	Brown Knoll	0831
68	Chimney Rock	0914
69	Cattle Camp/Cave Valley	0903
70	Cave Valley Ranch	0904
71	Haggerty Wash	0907
72	Cave Valley Seeding	0908
73	Shingle Pass	0906
74	Dee Gee Springs	0815
75	Sorenson Well	0818
76	East Wells	0830
77	Sheep Trail Seeding	0825
78	Wells Station	0819
79	Maybe Seeding	0828
80	Cove	0817
81	North Cove	0816
82	Swamp Cedar	0832
83	Big Six Well	0812
84	Douglas Point	0810
85	Douglas Canyon	0811
86	Preston	0806
87	McQueen Flat	0805
88	Willow Springs Addition	0825
89	Willow Springs Seeding	0824
90	Duckwater	0701
91	Warm Springs Trail	0622
92	Preston-Lund Trail	0822
93	Warm Springs	0606
94	Six Mile Ranch	0814
95	Sheep Pass	0905

ZONES

1

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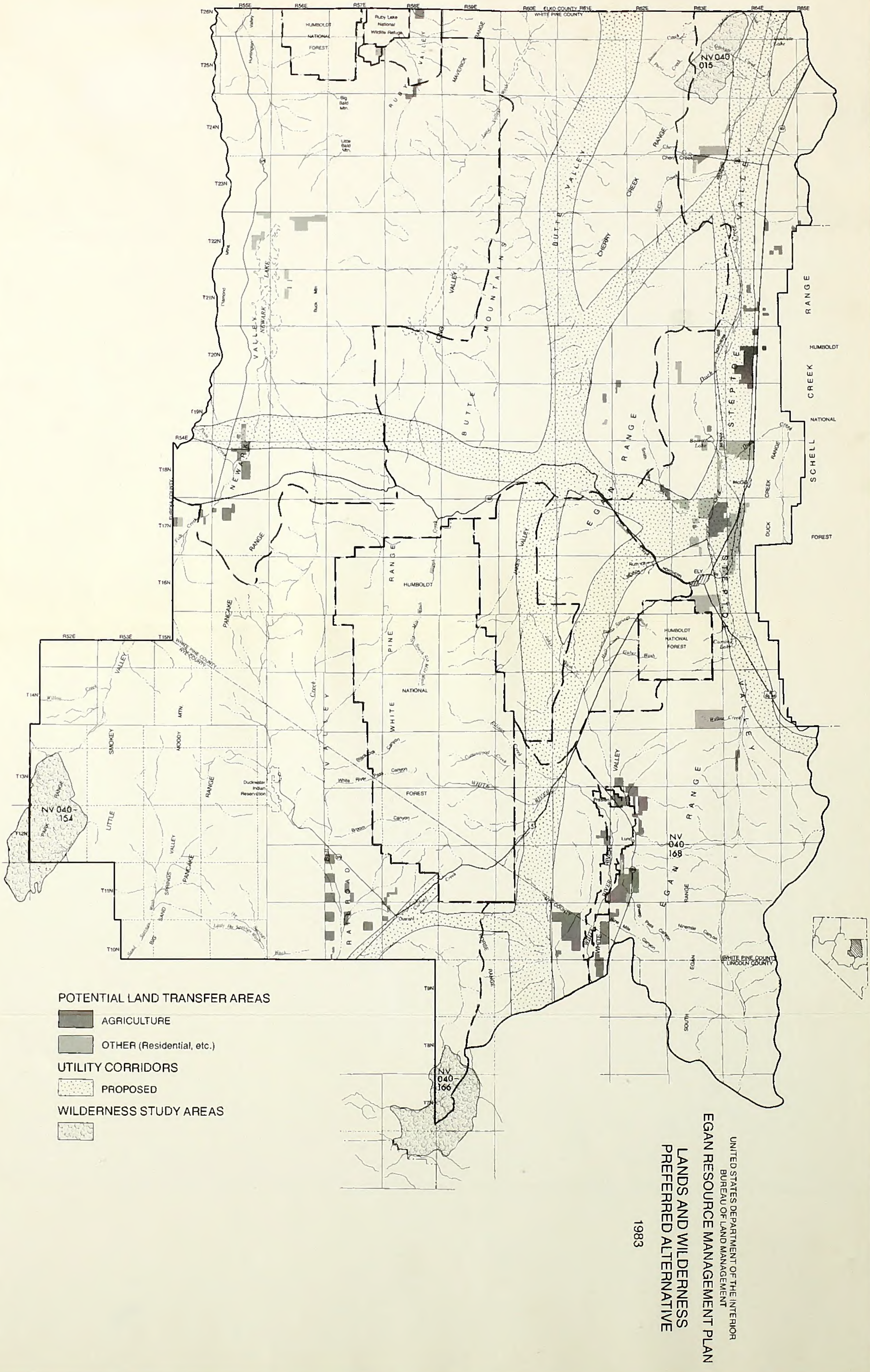
EGAN RESOURCE MANAGEMENT PLAN
GRAZING ALLOTMENTS
AND
MANAGEMENT ZONES

1983



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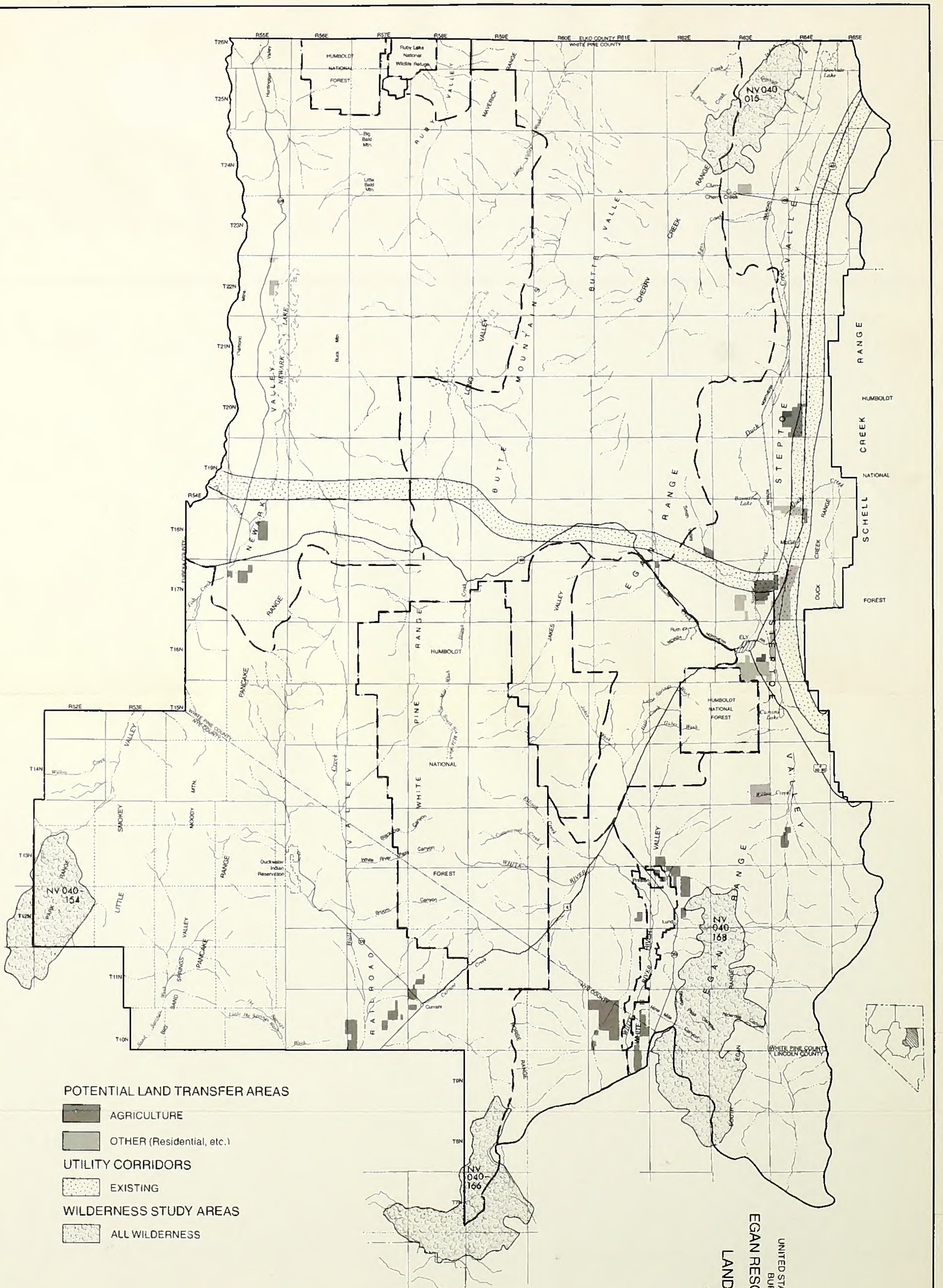
EGAN RESOURCE MANAGEMENT PLAN

LANDS AND WILDERNESS
PREFERRED ALTERNATIVE

1983



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EGAN RESOURCE MANAGEMENT PLAN
LANDS AND WILDERNESS
ALTERNATIVE B

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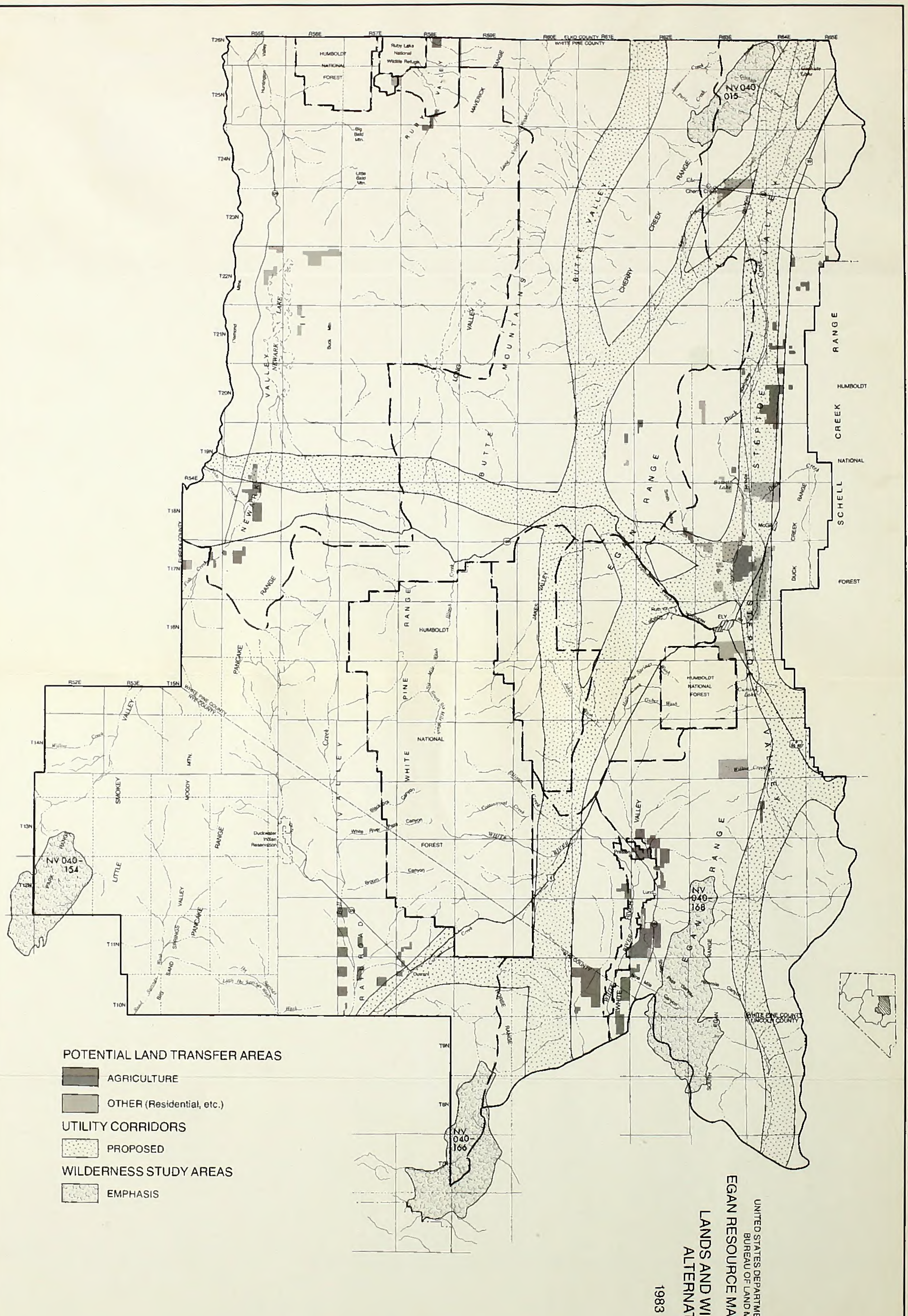

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EGAN RESOURCE MANAGEMENT PLAN
LANDS AND WILDERNESS
ALTERNATIVE C

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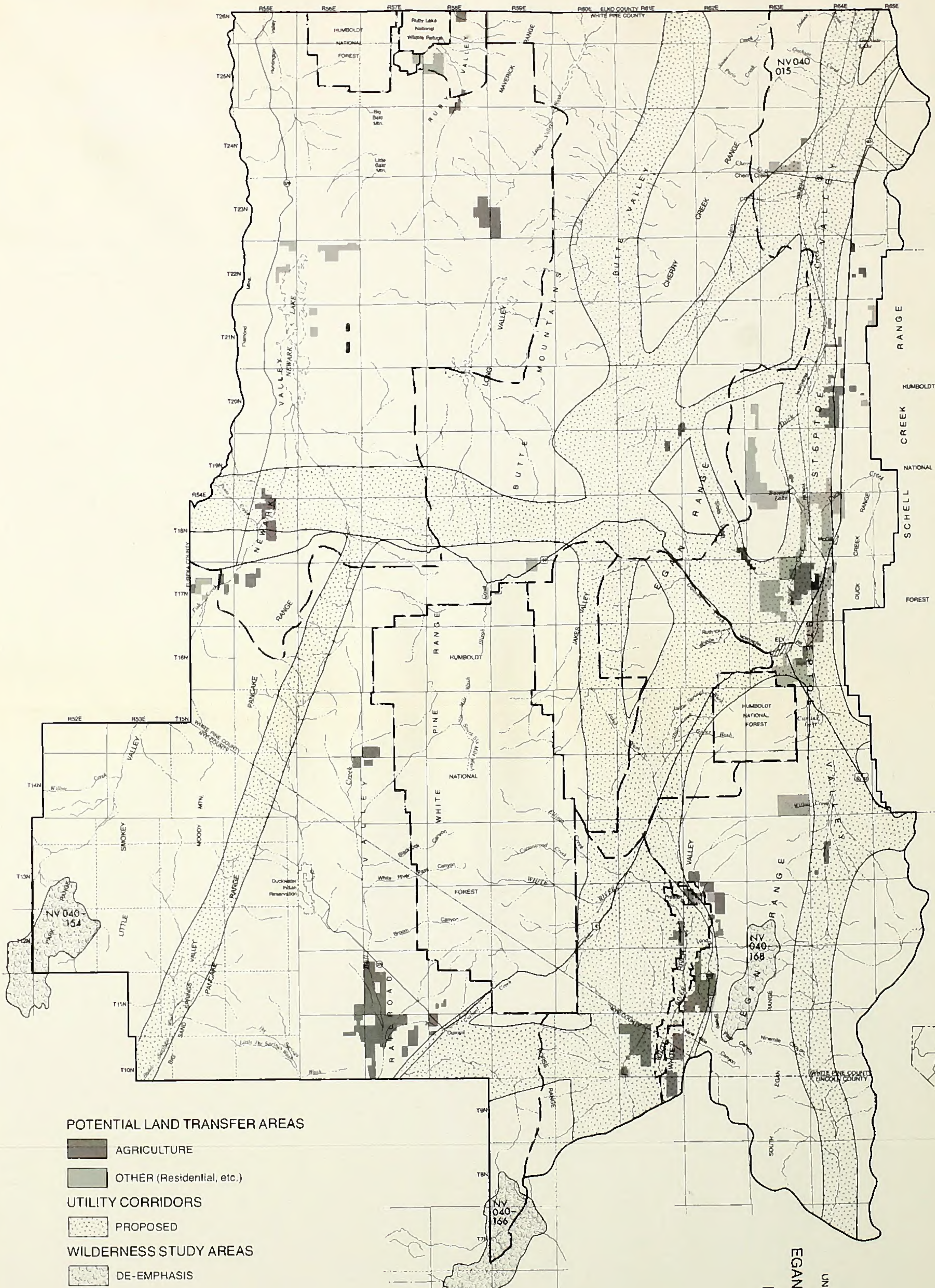

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EGAN RESOURCE MANAGEMENT PLAN
LANDS AND WILDERNESS
ALTERNATIVE D

1983

CHAPTER 3

AFFECTED ENVIRONMENT

CHAPTER THREE

AFFECTED ENVIRONMENT

INTRODUCTION

This chapter describes the resources and uses of the Egan Resource Area which may be impacted by any one of the five alternatives, reviewed in this plan. The resources and uses discussed are:

1. Vegetation
2. Livestock
3. Wildlife
4. Wild horses
5. Land Ownership and Corridor Patterns
6. Wilderness
7. Minerals and Energy
8. Social Analysis
9. Economic Analysis
10. Forestry

VEGETATION

Vegetation types in the Egan Resource Area vary from salt desert shrub types in the valleys to mixed coniferous forests at higher elevations. The vegetation types used are as follows:

Aspen
Meadow
Floodplain/basin wildrye, alkali sacaton, inland saltgrass
Salt desert & desert shrub/shadscale
Salt desert & desert shrub/black greasewood
Salt desert & desert shrub/winterfat
Northern desert shrub/sagebrush
Woodland/pinyon & juniper
Mountain brush/mountain mahogany
Playa
Mixed conifer forest/bristlecone pine

See the Vegetation Map found at the end of Chapter 2 for more specific locations of the vegetation types.

These vegetation types have been classified as to existing ecological successional stages by management zone. See Appendix 4 for vegetation type acreages by zone.

Appendix 5 shows the successional stages of the ten vegetation types found within the Egan Resource Area. The existing successional stage is shown along with the desired successional stage for each vegetation type by alternative.

There are no Federally-listed threatened or endangered plants in the Egan Resource Area. Apendix 6, however, identifies those species listed in the Federal Register (Vol. 45, No. 242, December 15, 1980) as candidates for addition to the list of endangered and threatened plants and are known to exist within the Egan Resource Area.

Aspen - This site type is not plentiful in the Resource Area and occurs only in relatively small acreages. It is generally an extra water site, with basin wildrye, other grasses, and assorted forbs being the predominant understory with an overstory of aspen. Soils are nonsaline, deep, and usually loamy.

Meadow - This site type includes wet meadow, dry meadow and other riparian vegetation, i.e., roses, willows, and chokecherry. It is generally an extra water site, with basin wildrye, other grass, big sagebrush and various assorted forbs. Some locations find this vegetation type with an overstory of Aspen. Soils are nonsaline, deep and usually loamy.

Floodplain/Basin Wildrye, Alkali Sacaton, Inland Saltgrass - This is the site type commonly found in the flats, bottoms and basins of most valleys in the resource area, where extra water, somewhat saline soils and a high water table exist. The dominants are alkali sacaton, basin wildrye, and inland saltgrass. Other grasses such as alkali cordgrass, western wheatgrass, alkali grass and thickspike wheatgrass are present. Rubber rabbitbrush, big sagebrush, fourwing saltbush, Ephedra, shadscale, and black greasewood along with various forbs may be present. There are several variants of this site depending on the amount of salts and water present. Where water is abundant, the aspect is grasslike plants and grass. Where gullies exist, dropping the water table, rubber rabbitbrush comes in strongly. Along the outer edge of the type, rubber rabbitbrush and big sagebrush are common. On saltier soils, black greasewood and some shadscale become part of the cover. This site type has a restricted drainage.

Salt Desert and Desert Shrub/Shadscale - The principal plant on this type is shadscale. There are several variants, including shadscale occurring in almost pure form or with shadscale/winterfat/bud sagebrush; shadscale/black sagebrush/winterfat; or in any of the above combinations with some black greasewood.

Ephedra, fourwing saltbush, low rabbitbrush and Kochia may be present. Associated with shadscale are grasses such as Indian ricegrass, squirreltail, Sandberg bluegrass, and needle-and-thread. Forbs include buckwheats, phlox and globemallow.

Shadscale occurs on a number of topographic positions and is mainly found on soils with some restrictive layer or hardpan within rooting depths and seems to prefer slightly to moderately salty soils. It may also occur on areas of low rainfall or droughty soils.

Salt Desert and Desert Shrub/Black Greasewood - The dominant species is black greasewood, with rubber rabbitbrush present in varying amounts. The understory may consist of shadscale or iodinebush along with inland saltgrass and alkali sacaton. Ephedra, fourwing saltbush, and big sagebrush are sometimes present.

This type usually has a high water table and is highly variable depending on the amount of salts in the soil, the degree of flooding, and the depth to water. It is found on flats, basins, and bottoms where the salt and water collect. Where the salt content is high, black greasewood and iodinebush may be the main components. As the salt content lowers and less water is present, shadscale, alkali sacaton, and inland saltgrass are common under the greasewood. Big sagebrush is usually located on more or less salt-free inclusions and on the fringes of the type.

Salt Desert and Desert Shrub/Winterfat - In colony form, winterfat is the main species. This type has several variations, including more or less pure winterfat; winterfat/black sagebrush/bud sagebrush; and winterfat/shadscale. Winterfat also grows singly scattered throughout the salt desert and northern desert shrub types. Grasses are present in sparce amounts. The most common are Indian ricegrass, squirreltail, and needle-and-thread. Forbs present may include globemallow, buckwheats, and princesplume.

Northern Desert Shrub/Sagebrush - This site type consists of two subtypes; one where big sagebrush is dominant on the deeper soils and the other where black sagebrush is dominant on shallower soils. Big sagebrush is dominant in the first subtype. A number of other shrubs, winterfat, fourwing saltbush, ephedra, spiny hopsage, low rabbitbrush, horsebrush, and rubber rabbitbrush occur in varying amounts with the sagebrush. Black sagebrush is the dominant species in the second subtype, with some ephedra, bud sagebrush, winterfat, fourwing saltbush and low rabbitbrush.

In both subtypes, common grasses include needle-and-thread, sand dropseed, bluebunch wheatgrass, basin wildrye, squirreltail, Sandberg bluegrass and Indian ricegrass. Forbs include globemallow, penstemons, princesplume, thistles, phlox, buckwheats and mustards.

Woodland/Pinyon-Juniper - This site type has two predominant understories, big sagebrush and black sagebrush. Pinyon-juniper with the big sagebrush understory grows mainly on the deeper soils, while the pinyon-juniper with the black sagebrush understory grows on the shallower soils.

The pinyon-juniper type has an overstory of singleleaf pinyon pine and Utah juniper in varying amounts. Pinyon pine has been selectively cut in the past leaving a residue of juniper. Usually pinyon pine grows on the more favorable sites and juniper adapts to the drier sites. However, juniper will grow well on the better sites with pinyon pine. Juniper is probably the pioneer species in this type. The midstory may include mountain mahogany at higher elevations, bitterbrush, snowberry, cliffrose, serviceberry and rabbitbrush. The understory has big or black sagebrush with grasses or forbs. Grasses found are Sandberg bluegrass, Nevada bluegrass, Idaho fescue, bluebunch wheatgrass, basin wildrye, needle-and-thread, Indian ricegrass and squirreltail. Forbs include globemallow, gilia, buckwheats, penstemons and Indian paintbrush.

Mountain Brush/Mountain Mahogany - This site type is composed of an almost pure stand of curlleaf mountain mahogany with little to no understory. If an understory is present, it is usually snowberry. It seems to prefer granites and limestones. Mountain mahogany approaches tree size with some individuals thirty feet tall with over one foot diameter stems. It tends to occur just above the pinyon-juniper type, fitting into the topographic zone usually occupied by ponderona pine elsewhere. Mountain mahogany also grows throughout the pinyon-juniper belt, more or less in clumps or singly. In this zone, it may have an understory of big sagebrush and snowberry and antelope bitterbrush.

Playas - Areas almost devoid of vegetation due to periodic ponding and high salts. They have a high water table and are found in the lowest portions of closed drainage basins.

Mixed Conifer Forest/Bristlecone Pine - These two site types have been combined, since neither account for a significant portion of the resource area. Mixed conifer has white fir, limber pine, and mountain mahogany as the main species. Others are aspen, ponderosa pine, douglas fir, and bristlecone pine. The understory may include snowberry, bitterbrush, big sagebrush, low sagebrush, manzanita, snowbrush and currant.

Common grasses are Idaho fescue, Canada wildrye, basin wildrye, sheep fescue, bluebunch wheatgrass, Nevada bluegrass, Sandberg bluegrass, junegrass, letterman needlegrass and other species. Forbs include phlox, buckwheats, wild onion, bluebell, larkspur, miner's candlestick, Indian paintbrush and locos.

White fir grows in patches and clumps. Aspen is found along streams, seeps, and wet places. Ponderosa pine is found rarely on the Egan range or on the White Pine range and is nonexistent in the western portion of the resource area. Where it does grow, however, the mean annual temperature may be slightly higher. Limber pine is found scattered throughout the forest. Douglas fir, although uncommon, would be found along stream courses and wet places. Mountain mahogany attains tree size in this area.

Bristlecone pine is found on the upper elevations of the forest biome, usually on droughty soils. It grows in almost pure stands with little to no understory on limestones and granites. Bristlecone pine is a very slow-growing plant and may live for an exceedingly long time. It is being used for tree ring dating purposes and a chronology going back to about 6,000 B.C. has been developed from bristlecone pine data in the western United States.

LIVESTOCK

Essentially, all of the public lands in the Egan Resource Area are within grazing allotments. The Grazing Allotments and Management Zones Map at the end of Chapter 2 displays the allotment boundaries. The resource area has a total of 216,348 AUMs active grazing preference. The three year average licenses use (3/1/79 to 2/28/82) was 123,461 AUMs or 57% of the total active preference. Appendix 1 shows livestock grazing data for the Egan Resource Area.

The resource area provides year round forage for both cattle and sheep. The higher elevations are used for summer range, the valley bottoms for winter range, and the benches and seedings are used in the spring and fall. On BLM administered lands, however, there is much more winter utilization than summer, because much of the summer range is administered by the U.S. Forest Service.

The Cattle Camp/Cave Valley, Heusser Mountain, Steptoe, Cold Creek and Duck Creek Flat allotments are the only allotments under Allotment Management Plans (AMPs). They comprise 6.5% of the resource area or 248,246 acres, and 10% of the total active grazing preference or 21,561 AUMs.

Zone 1 - Eleven grazing allotments make up this Zone. The preference is 57,279 AUMs or 27% of the resource area's total preference. The three year average licensed use is 27,738 AUMs (23% of the resource areas total three year licensed use and 48% of total preference for this zone.

Zone 2 - This zone is comprised of 15 grazing allotments. (44% of the resource area). It has 78,085 AUMs preference, which is 36% of the resource area total preference. Three year licensed use in this zone is 43,529 AUMs, (which is 35% of the resource area total three year licensed use) and 56% of this zone's preference. This zone is utilized by cattle and sheep on both a seasonal and year round basis.

Zone 3 - Forty-three grazing allotments are included in this zone. It has a total of 58,014 AUMs of preference (28% of the total resource area's preference). Three year average licensed use for this zone is 36,899 AUMs, (30% of the resource area total licensed use). The mean percentage for 3-year average licensed use per allotment is 70% in this zone. Use here is generally seasonal, with the high elevations being used as summer range and lower valleys used as winter range.

Zone 4 - Four grazing allotments make up this zone. Grazing preference totals 7,606 AUMs (3% of the total grazing preference for the resource area). The three-year average licensed use for the zone is 2,822 AUMs (2% of the resource area's total three year average licensed use). The mean percentage of three-year average use per allotment is 46% of this zone's preference.

Zone 5 - This zone is comprised of 17 grazing allotments. Total preference in this zone is 15,364 AUMs (6% of the total preference in the resource area). This zone's total three-year average licensed use is 12,473 AUMs (10% of the total resource area three-year average). The mean three-year licensed use in the zone is 84% of the total preference per allotment.

WILDLIFE

The Egan Resource Area provides habitat for 255 species of animal life. Types of habitat range from salt desert shrub to alpine timber, resulting in a highly diverse fauna. Of special importance to the wildlife species diversity of eastern Nevada are riparian zones. Table 3-1 reflects the various riparian types and acreages of riparian vegetation in the Egan Resource Area. Riparian vegetation makes up 1.4% of the total vegetation within the resource area. Wildlife use riparian zones disproportionately more than any other type of habitat (Thomas et al. 1980). Riparian areas create well-defined habitat zones within the much drier surrounding areas and generally are more productive in terms of biomass, both plant and animal, than the remainder of the area. They provide habitat for species that otherwise wouldn't inhabit the Great Basin Region. Riparian zones are also attractive for other uses, such as livestock grazing and recreation which directly conflict with wildlife. There are approximately 89 summer miles and 121 winter miles of stream and associated stream riparian vegetation with in the Egan Resource Area (Appendix 7). See Appendix 8 for condition rating system used to determine stream riparian condition. See Appendix 9 for streams in each zone and associated riparian habitat condition.

EGAN RESOURCE MANAGEMENT PLAN

TABLE 3-1

RIPARIAN VEGETATION TOTALS

Riparian Type	Acreage
Wet Meadow	11,196
Dry Meadow	25,865
Aspen	13,753
*Other	3,831
Total	54,645 acres

*Includes roses, willows, choke cherry, etc.

In 1981, BLM's wildlife inventories for the Egan Resource Area were completed under the guidelines of the Integrated Habitat Inventory and Classification System (BLM Manual 6602). A total of 176 species of birds, 52 species of mammals, 17 species of reptiles and amphibians and 10 species of fish were recorded for the Egan Resource Area (Suminski, 1981). The report is available at the Ely BLM District Office.

Two wildlife habitat management plans have been approved for two areas within the Egan Resource Area: Goshute-Steptoe Valley, and Buck, Bald, and Maverick Mountains-Newark Valley. Neither of these plans, however, have been fully implemented. Full implementation is scheduled when funds become available.

Big Game - Mule deer, pronghorn antelope, elk, mountain lions, and bighorn sheep are the big game species occupying the resource area which are directly affected by livestock grazing. Of the five species, mule deer are the most abundant and widespread, followed by pronghorn antelope. Only small populations of elk and bighorn sheep use public lands within the resource area. Bighorn sheep use occurs only during severe winters. Refer to Wildlife Habitat (Big Game) Map at the end of this chapter.

Mule Deer - Mule deer populations in the Egan Resource Area have fluctuated greatly in the past 25-30 years. Deer numbers peaked in the late 1950s and the early 1960s. The most recent trend information indicated that the population is static in the Egan-Cherry Creek mountain range and increasing in the other areas of the resource area (Larry Gilbertson, Nevada Department of Wildlife, personal communication, 1982).

The 1981 estimate of existing deer numbers in the Egan Resource Area is between 9,383 in the summer and up to 20,773 during the winter months. This large winter figure takes into account the migration of the largest deer herd within the state, the Ruby Mountain herd, estimated in 1981 to be 22,870, in 1982 at 30,000 deer (Duane Erickson, Nevada Department of Wildlife, Personal communication, 1982). Only 5% of this herd summers on BLM administered lands but between 40% and 50% winter on BLM-administered land in the Buck, Bald and Maverick Mountains area, causing large population fluctuations in the Egan Resource Area (Duane Erickson, Nevada Department of Wildlife, personal communication, 1982). The actual percentage of the Ruby Mountain deer herd wintering on BLM administered land is dependent upon the severity of the winter months; the more severe the winter, the more deer that migrate onto BLM land.

In 1976, Nevada Department of Wildlife initiated restricted buck only hunting seasons in an attempt to increase deer populations in Nevada. The deer herd in the Schell Creek Mountains has responded well and exceeded reasonable numbers estimates in the Egan Resource Area portion of these mountains. Deer herds in other mountain ranges in the resource area are static in the long term with slightly increasing population approaching reasonable numbers except for Egan-Cherry Creek Mountain herd whose population is static with a slight decrease over the short term (Larry Gilbertson, Nevada Department of Wildlife, personal communication, 1982). Ample winter range is available, therefore Nevada Department of Wildlife believes lack of response in the Egan-Cherry Creek herd is related to summer range habitat where intense competition occurs among domestic sheep, cattle, wildlife and wild horses for forage. (Larry Gilbertson, Nevada Department of Wildlife, personal communication, 1982).

Important forage plants on winter range include snowberry, sagebrush, serviceberry, antelope bitterbrush and mountain mahogany. Mountain mahogany and pinyon-juniper woodlands are important vegetation types on winter range for thermal and escape cover. On summer range deer tend to key on riparian areas as well as the mountain brush community. On spring ranges deer take advantage of grasses and forbs during the spring greenup. They may occupy these areas for only a short two to three-week period in the early spring, but their densities can often exceed 250 deer per square mile (Mark Barber, Bureau of Land Management, personal communication, 1983).

Pronghorn antelope - Pronghorn numbers within Steptoe and Ruby Valleys have been on the increase for several years (Duane Erickson, Nevada Department of Wildlife, personal communication, 1982). Recent antelope sightings by Ely District BLM personnel indicate that antelope populations in Little Smokey Valley, Big Sand Springs

Valley and Railroad Valley are remaining static with a slight increase. Antelope believed to be from the Little Smokey Valley herd seem to be expanding their range to the north. Antelope have been spotted on two different occasions in Newark Valley just south of Buck Mountain. On several occasions last summer, a group of antelope was sighted east of the Pinto Creek Ranch in south Newark Valley (Dale Elliot, Nevada Department of Wildlife, personal communication, 1983). Competition for forage, space and water between wild horses, domestic livestock and antelope could be one of the limiting factors restricting antelope populations in Big Sand Springs, Little Smokey and Railroad Valleys. Several guzzlers have been planned for the Big Sand Springs and Railroad Valleys. Livestock season of use for Railroad and Little Smokey Valleys is generally winter use for both sheep and cattle. Big Sand Springs Valley is generally cattle summer use range. Antelope and horses use all the valleys yearlong (Vearl Christiansen, Bureau of Land Management, personal communication, 1982).

The potential exists for re-establishing viable pronghorn populations in White River, Butte, Long and Newark Valleys since animals are encountered on occasion. Poor water distribution is the primary factor limiting their reestablishment.

Elk - Elk occupy public land in the Egan Resource Area on a yearlong basis. Resident populations inhabit the south Egan Range, Horse and Cattle Camp area, Mt. Grafton, and possibly a small population exists on Heusser Mountain in the Egan-Cherry Creek mountain range. Most of the Schell Creek elk herd winters in the Tamberlaine allotment along the west side of the Schell Creek Mountains south of Ely, Nevada. In the last few years elk have dispersed to many of the mountain ranges in the Ely area, as indicated by many recent sight records. They have been spotted as far west as the the White Pine Range, about 40 miles from their usual habitat. Elk numbers are also increasing in the Egan-Cherry Creek mountain range south of Ward Mountain, from Connors Pass south in the Horse and Cattle Camp area, and in the Mount Grafton area. The Schell Creek herd north to Berry Creek in Duck Creek Basin seems to be static with possibly a slight increase (Larry Gilbertson, Nevada Department of Wildlife, personal communication, 1982).

Bighorn Sheep - Both Nevada Department of Wildlife and BLM consider the bighorn sheep to be a sensitive species. Nevada Department of Wildlife is presently planning to re-establish mountain sheep in most of its former range. A remnant population inhabits the White Pine mountain range just north and east of Currant, Nevada. During severe winters the sheep leave Forest Service-administered land and winter on BLM-administered land.

Upland Game

Sage Grouse - Sage grouse habitat within the Egan Resource Area occurs within all the valleys in the resource area. Butte and Newark Valleys are the valleys of major grouse occurence, although strutting, nesting, brooding and winter areas have been identified in all valleys. Crucial to sage grouse survival is protection of strutting grounds, a 2-mile radius of these strutting grounds, and associated meadow riparian habitat areas. As forbs dry up on upland sites, grouse begin to move onto meadows; these upland meadows then become additional areas crucial to sage grouse survival (Savage, 1969; Oakleaf, 1971). Timing of this movement is weather dependent. Most sage grouse strutting activity in this area of Nevada commences the second week of March and may continue into the first week of May.

Sage grouse populations in this area of Nevada could be considered to be slightly increasing due to the information obtained from 1982's sage grouse strutting ground inventory. A total of 100 sage grouse strutting grounds have been located within the Egan Resource Area. Seventeen new grounds were located in 1982. Realizing that a predator, vehicle, etc. could have flushed the strutting males from a traditional ground and upon landing the males commenced strutting activities as the observer passed the area, it was determined that repeated visits to the newly located grounds would determine actual strutting activity. Seven traditional grounds determined to be inactive in 1981 were found to be active in 1982. The number of males observed on these leks ranged from three to twenty-two. Twenty-seven traditional grounds were not checked in 1982; however, in 1981, nineteen of the twenty-seven grounds were active, realizing 70% activity (Perkins, 1982). Refer to Wildlife Habitat (Upland Game) Map at the end of this chapter.

Blue Grouse - Within the Egan Resource Area blue grouse habitat exists in all mountain ranges with the exceptions of the Pancake and Butte Mountains. The Diamond Mountain range exhibits only small localized populations primarily due to the lack of winter range (San J. Stiver, Nevada Department of Wildlife, personal communication, 1982). All non-pinyon conifers are critical for blue grouse survival in the winter months. The Egan-Cherry Creek Mountains are the most important habitat in the resource area for the blue grouse. The most critical limiting habitat factor to blue grouse is winter range (San J. Stiver, Nevada Department of Wildlife, personal communication, 1982). At the present time blue grouse populations are stable at relatively high numbers (San J. Stiver, Nevada Department of Wildlife, personal communication, 1982).

Chukar Partridge - The most important chukar partridge habitat within the resource area is the east side of the Diamond Mountain range. Most of the mountain ranges within the resource area have localized resident populations around perennial water sources. Guzzlers have been planned in good chukar habitat, where there is not existing water. Localized populations can exhibit relatively high populations in good nesting years (San J. Stiver, Nevada Department of Wildlife, personal communications, 1982).

Valley Quail - Valley quail exist in White River Valley within the resource area. Valley quail have a limited population that is presently static at a low level in and around the agricultural lands of Lund and Preston (San J. Stiver, Nevada Department of Wildlife, personal communication, 1982).

Scaled Quail - Scaled quail in the resource area are found only in north White River Valley around Lund, Preston and as far north as Jake's Wash. The population that exists in northern White River Valley is one of the few viable populations in the state (San J. Stiver, Nevada Department of Wildlife, personal communication, 1982). In the winter of 1978 the White River Quail populations were decimated due to severe winter conditions, they are presently in the rebuilding process and should soon be numerous again (San J. Stiver, Nevada Department of Wildlife, personal communication, 1982).

Hungarian Partridge - Hungarian partridge exhibit sparse isolated populations within the valleys of the resource area. Brooding partridge have been documented in Steptoe Valley just sourth of the town of Cherry Creek. An estimated 90-100 brooding birds were documented at Crystal Creek in Railroad Valley in the spring of 1981. Adult birds have been seen in Long, Newark, Steptoe and Railroad Valleys. Populations of Hungarian partridge appear to be static at relatively low numbers within the resource area.

WATER FOWL - Ruby Lake National Wildlife Refuge lies within a hydrologically-closed basin in Elko and White Pine Counties in northeastern Nevada. This refuge was established in 1938 to provide sanctuary for migratory birds and other wildlife. It is a link in a chain of Pacific Flyway refuges. The refuge borders the Egan Resource Area to the north in south Ruby Valley. This 27,191 acre refuge and wetlands in Butte, Long, Newark, White River, Steptoe and Railroad Valleys provide important breeding, resting and feeding habitat for resident and migratory waterfowl within the Great Basin environment, which, in turn provides for greater species diversity. Common nesting species include the American Coot, mallards, gadwalls, a few pintails, a few species of diving duck, and Canada geese. Common nesting passerine species in the valleys containing ample wetland habitat are the red-winged blackbird and yellow-headed blackbird.

AQUATICS - Habitat for game fisheries within the Egan Resource Area consists primarily of small mountain streams typically 4 to 9 feet wide and usually not over 1 foot deep. Appendix 8 reflects the fish species, habitatcondition and present conflicts of the Egan Resource Area streams as of the 1981 stream survey. There are 16 streams in the resource area with fishable populations. Fishable streams total 30.2 miles. The two lakes with sport fisheries that are within the resource area are Comins Lake south of Ely and Bassett Lake north of Ely. Both are in Steptoe Valley and on private land. Two reservoirs providing sport fishing within the resource area are Cold Creek and Illipah Reservoirs, both located on private property. Game species present in these streams, lakes and reservoirs are the Utah cutthroat trout (a State sensitive species), northern pike, largemouth bass, rainbow, brown and brook trout. The White River Mountain Sucker and White River Speckled Dace are two species endemic to the White River and considered sensitive in the State. White River originates at 8,500 feet on the east side of the White Pine Range administered by the United States Forest Service (USFS). Its lowest elevation in the Egan Resource Area is 6,000 feet where it drains into White River Valley. The river is 19 miles long in a normal summer. Three and one quarter miles (17%) of this river are on public land in summer. The only tributary of this river found in the Egan Resource Area is Ellison Creek, which is usually dry. There are only five points where the river is readily accessible although there are several roads in poor condition which follow the river.

The following fishes occurred historically in White River and were endemic to it: White River Springfish, Preston White River Speckled Dace, White River Spinedace and the White River Cutthroat Trout. Trout stocking of the river occurred several times, initially in 1923 when rainbow, brook and steel head trout were introduced. Recent surveys conducted with the aid of Nevada Department of Wildlife resulted in the collection of White River Speckled Dace and White River Mountain Sucker. Both of these are listed as sensitive species and could easily qualify as threatened and endangered in the future (R. Suminski, 1981).

Goshute Creek has a viable population of Utah Cutthroat trout, a State sensitive species since 1980. No stocking takes place at present. Habitat surveys since 1976 rated total habitat condition as poor to fair in all but one year. The creek has a tremendous variation of physical conditions including two areas of livestock degradation. It is anticipated that Nevada Department of Wildlife will continue to use the Goshute Creek population as brood stock for future transplants. (R. Suminski, 1981).

The Newark Valley Chub became a State Sensitive species in 1981. The chub is only found on public land at four spring heads in Newark Valley. Chubs are found at the following locations:

T. 20 N., R. 55 E. sec. 22
T. 20 N., R. 55 E. sec. 22
T. 22 N., R. 56 E. sec. 21
T. 21 N., R. 56 E. sec. 28

Other Wildlife

Nongame birds and mammals occur in all habitat types within the Egan Resource Area. Habitat diversity within the normal monotypic shrub communities is the result of unique features such as springs, rock outcrops, aspen clones, riparian vegetation or wet and upland meadows.

Common wildlife found within the lower elevation shrub and grassland communities (sagebrush, rabbitbrush, wheatgrasses) include pygmy rabbits, desert cottontails, blacktail jackrabbits, least chipmunk, deer mouse, coyote, bobcat, badger, harrier, prairie falcon, American Kestrel, mourning dove, horned lark, sage sparrow, ferruginous hawk and Brewer's sparrow. Of particular interest is the ferruginous hawk, which was removed from the U.S. Fish and Wildlife Region 1 Sensitive Bird Species list in 1982, but remains on the Audubon's "blue List." Nevada's nesting population of this raptor is estimated to be between 200 and 250 nesting pairs, with 50% of the states yearly production of this raptor coming from the Ely BLM District. Seventy-five percent of those raptors come from the Egan Resource Area (San Stiver, Nevada Department of Wildlife, personal communication, 1982). A ferruginous hawk nesting study conducted in 1981 and 1982 within the Egan Resource Area resulted in documentation of 56 active nest sites. Butte, Newark and Long Valleys were of most importance to the nesting hawks although all other valleys within the resource area are also inhabited by these raptors (Perkins, et al, 1982). One of the only documented Swainson hawk nest sites on public land in Nevada was located in White River Valley in the 1981 study. There are strong indications that the Nevada population of Swainson hawks is declining. Only 29 Swainson hawk nesting territories are documented in the state, and aerial surveys directed to specifically locate nesting Swainson hawks have found most nest territories to be inactive (Gary Herron, Nevada Department of Wildlife, personal communication, 1981).

Typical wildlife species found in mountain shrub communities (bitterbrush and mountain mahogany) include Nuttall's cottontail, least chipmunk, deer mouse, coyote, bobcat, mountain lion, red-tailed hawk, golden eagle, common flicker, bushtit, Townsend's solitaire, green-tailed towhee, chipping sparrow, elk, and mule deer.

Within the pinyon-juniper type the species include Nuttall's cottontail, cliff chipmunks, woodrats, coyote, bobcat, Coopers and sharp-shinned hawks, hairy woodpecker, Say's phoebe, pinyon jay, scrub jay, mountain bluebird, rufous sided towhee and occasionally a Stellar's jay. Species which may be found in quaking aspen and white fir include Uinta chipmunk, bobcat, deer mouse, blue grouse, goshawk, Cooper's hawk, flycatchers, Clark's nutcracker, mountain chickadee, western tanager and gray-headed junco.

Endangered species found in the Egan Resource Area are the bald eagle and peregrine falcon. Bald eagles migrate into the resource area in December and depart as late as April. Inventories to determine bald eagle use areas within the resource area have identified the following areas: White River, Newark, Railroad, northern Butte, Steptoe, and on occasion Jake's Velley. A bald eagle roost tree has been identified in Railroad Valley on private land. Peregrine falcons can be seen year around. The most recent sightings were in the spring of 1981, one in southern Steptoe Valley and the other in Duck Creek Basin east of McGill.

Intermittent, as well as permanent wetlands of varying size in Newark, Butte, Railroad, Steptoe, Ruby, Huntington and White River Valleys provide habitat for both nesting and migrating shorebird populations. Nesting habitat fluctuates yearly with water supplies. Some nesting shore birds common to the resource area include the American bittern, killdeer, common snipe, long-billed curlew, and willet. Snowy plovers nest on alkali salt flats in Newark Valley. Mourning doves are found in all habitat types.

Reptiles and amphibians common to the Great Basin are found in the resource area. The most common species encountered will be the sagebrush lizard, collared lizard, Great Basin fence lizard, Great Basin gopher snake and the western diamondback rattlesnake.

WILD HORSES

At present, wild horses are found in nine identified herd use areas covering all or part of 23 grazing allotments in the Egan Resource Area. Following the enactment of the Wild and Free Roaming Horse and Burro Act on December 15, 1971, historical information was used to determine herd use area boundaries. Since that time aerial inventories and ground observations have been used to refine the use area boundaries and herd size data. See the Wild Horse Herd Use Areas Map at the end of this chapter for specific locations of each herd. The dimensions of herd use areas and numbers cannot be determined exactly because horse populations fluctuate and bands move across use areas, resource area and district boundaries. Wild horses in the Cherry Creek, Buck and Bald, and Diamond Hills herds cross into the Elko District. The Diamond Hills herd also utilizes the Battle Mountain District. The Antelope herd moves between the Egan and Schell Resource Areas in the Ely District, and the Monte Cristo herd also uses U.S. Forest Service land in the Humboldt National Forest.

The 1982-83 estimate of existing wild horse numbers based on aerial census, in the Egan Resource Area is 2,235. The largest wild horse herd in the area is the Buck and Bald herd use area with an estimated population of 1,185 (excluding Elko), and the smallest herd is Jake's Wash with 20 horses.

Wild horse populations have historically fluctuated, due to natural increase and private gatherings prior to the passage of the Wild horse and Burro act and two BLM gatherings since 1971.

The most recent information indicates that wild horse populations in the Egan Resource Area are static in the Jake's Wash, White

River, Butte, Cherry Creek and Antelope Herd Use Areas, and increasing in Buck and Bald, Monte Cristo and Sand Springs.

Ample year-long range is available resource area wide, but competition is becoming more intense in specific areas as livestock and wildlife are competing with wild horses for available forage and water.

Wild horses in the Egan Resource Area are generally in good condition since up to the present time there has been adequate forage, water, cover and solitude in their environment. Problems wild horses face in the future are competition for forage and water and disruption of their free roaming behavior by fencing or other human activities.

LAND OWNERSHIP AND CORRIDOR PATTERNS

The BLM administrates 85% of the land within the resource area boundaries, the remaining 15% is either private, state owned or managed by other federal agencies. Public land is well-blocked throughout most of the resource area. In and/or around the communities of Ely, McGill, Ruth, Preston, Lund, and other outlying ranches and settlements are there intermingled patterns of public and private lands. Public requests for disposal of public lands is comparatively high adjacent to these private lands. The private lands range in size from relatively small 40-acre parcels to large blocks of 15,000 acres near Ely or McGill. The diversity in land use interest generally varies by management zone. Land next to ranches is desired for expansion of operating bases; land next to communities is primarily wanted for urban and suburban purposes; and land in some valleys is desired for farming as the result of the relatively recent resurgence of interest in developing land under the agricultural land laws such as the Desert Land Act and Carey Act.

The Egan Resource Area is crossed by a number of utility distribution and transportation facilities. Only one major electrical transmission facility traverses the resource area east to west; smaller ones run north-south on the east side of the resource area. To date, no utility right-of-way corridors have been formally established. Three U.S. highways pass through the resource area generally from the north-south and east-west, and one railroad enters the resource area in its northeast corner and goes south to Ely. Major transmission lines and some transportation facilities are anticipated in the future in support of the planned Intermountain Power Project and the White Pine Power Project.

Variations in land ownership patterns and land uses in the five management zones are discussed below:

Zone 1 - Buck and Bald/Diamonds

Most of the private land in this zone is associated with ranches which are scattered along the two paved highways traversing Newark Valley. One ranch headquarter's is located in sothern Ruby Valley. Approximately 97% of this zone is well-blocked public land. One major electric transmission line crosses east to west in the southern end of the zone.

Zone 2 - Duckwater-Buttes

This zone contains approximately 1,757,000 acres of well-blocked public land. Most of the approximately 28,000 acres of private land in this zone is fragmented into smaller parcels in the northeast side of the zone or along U.S. Highway 6 near Currant, Nevada, or in the vicinity of the nearly 3,800 acre Duckwater Indian Reservation. A few ranch headquarters are located in the northeast corner of the zone.

Of the 21,519 acres requested for private and public purposes in this zone, over 19,000 acres has been applied for under the Desert Land Act and the Carey Act (Railroad Valley).

Zone 3 - Steptoe/Horse & Cattle Camp

The high incidence of private land surrounding the communities of Ely and McGill has resulted in public pressures for public land disposal to satisfy various individual, local government and state government demands. The management of the intermingled public lands in this urbanized part of the zone is influenced by adjacent private land uses. In turn, the development of the private land adjacent to public land impacts public land resource values. State and local governments, have requested public land disposals, to promote community growth, economic activity and the public welfare.

One major transmission line, a railroad, several smaller electric transmission and distribution lines, and major highways crisscross this zone. The effect of these many linear utility lines is to create an east-west and a north-south right-of-way corridor through the zone.

Zone 4 - Jake's Valley

This relatively small management zone contains about 102,000 acres of public land. The approximately 9,000 acres of private land in this zone is almost entirely concentrated in the vicinity of Ruth, Nevada, where open pit copper mining has occured. Past land disposals here have been primarily for mineral extraction under the mining laws. Mining claims and other intermingled private and public land create some land management problems in the zone.

Zone 5 - West Lund Flats

Within this zone there is a relatively small amount of private land, but immediately adjacent to the southeast side of the zone, around Preston and Lund, Nevada, is a fairly large area of private land. Other than livestock grazing and farming, little land use activity occurs in the zone. The intermingling of private and public lands in the vicinity of Preston and Lund has resulted in requests for land disposals primarily under the agricultural land laws.

WILDERNESS

Introduction

Four wilderness study areas are partially or entirely within the Egan Resource Area. These study areas contain 236,780 acres. A total of 97,316 Egan wilderness study acres are actually outside of the resource area. The remaining 139,464 wilderness study acres occupy 3% of the resource area. They are generally mountainous areas which also contain some contiguous benchland and valley areas.

All of the wilderness study areas contain the mandatory wilderness characteristics. They are each more than 5,000 acres: Goshute Canyon, 35,594 acres; Park Range, 47,268 acres; Riordan's Well, 57,002 acres; and South Egan Range, 96,916 acres. The areas generally appear to be in a natural condition with the imprints of man's work substantially unnoticeable. Virtually all of the impacts of man were excluded from the areas during the intensive inventory. Portions of all four of the wilderness study areas provide outstanding opportunities for solitude. All of the Wilderness Study Areas except Riordan's Well offer outstanding opportunities for recreation. Present in all Wilderness Study Areas are opportunities for: hiking/backpacking, sightseeing, nature study, birdwatching, photography, camping, picnicking, rockhounding, big game hunting, vegetation collecting, trapping, small game hunting, predator calling, rock scrambling, climbing, mountain climbing, and horseback riding.

In addition to the mandatory wilderness characteristics, all of the Wilderness Study Areas contain special features which enhance their suitability for wilderness designation.

There is no designated wilderness in the Egan Resource Area. The only wilderness area in Nevada is the Jarbidge Wilderness, about 270 road miles from Ely. The Nevada BLM is studying about 90 wilderness study areas. Additionally, other agencies in Nevada have endorsed nine areas for wilderness and are studying an additional 13.

The Egan wilderness study areas are composed of three basic ecosystems: Great Basin Sagebrush, Juniper Pinyon Woodland and Mixed Conifer Forest. In addition the Riordan's Well unit contains a scattering of Ponderosa Forest. These types are under-represented in the National Wilderness Preservation System but are well represented in the areas being studied in Nevada.

Only the Park Range Wilderness Study Area is not within a five hour drive of any Standard Metropolitan Statistical Area (SMSA). The South Egan Range and the Riordan's Well units are within five hours of the Las Vegas SMSA, and Goshute Canyon is within five hours of the Salt Lake City/Ogden and Provo/Orem SMSAs.

For additional information on wilderness values and other resource values in the four wilderness study areas, refer to the Egan Wilderness Technical Report.

Park Range

The Park Range Wilderness Study Area (47,268 acres) is located about 70 miles west of Ely. The extremely rugged mountain range is characterized by rocky, tree covered peaks interspersed with mountain meadows.

Naturalness: Most of the area is in a pristine condition and appears to be affected primarily by the forces of nature. The main exception is the seeding along the northwest boundary of the wilderness study area. About 450 acres of the seeding are within the unit. The seeding was put in along contour lines and the general shape appears natural but the abrupt edges and composition of grasses make it appear unnatural.

Solitude: Opportunities for solitude are exceptional in the Park Range. The general configuration enhances opportunities. The diversity of terrain provides excellent topographic screening. Vegetation screening ranges from dense to none, but is generally good. Neither cherrystemmed roads nor outside sights and sounds are expected to seriously impact solitude opportunities since the area is so remote and receives little use. Users within this area would have excellent opportunities to avoid others and find a secluded spot. The core area is a highly dissected rugged mountain range typified by steep canyons, large rock outcrops, generally dense pinyon-juniper cover and open park-like meadows. Its remoteness enhances solitude opportunities.

Primitive Recreation: The Park Range Wilderness Study Area provides good opportunities for camping, wild horse viewing, hiking, rock climbing and scrambling, backpacking, nature study, photography and horseback riding. Eleven springs are found within the wilderness study area although no water flows out of the unit on a perennial basis. In combination, the quantity and quality of recreation opportunities is outstanding.

Special Features: The Park Range Wilderness Study Area contains archaeological sites, pristine mountain meadows, raptor eyries, and wild horses. The meadows, ungrazed by domestic livestock are rare and are of interest to the scientist and nature student alike. This area is being considered for a research natural area. Raptors include goshawk, prairie falcon, golden eagle, kestrel and Coopers hawk. Of scientific and educational interest are lithic scatters and isolates, and they may indicate potential for additional archaeological resources. The wild horses are of value for recreational viewing and scientific study.

Other Resource Values: Portions of four grazing allotments are within the wilderness study area. The area is used by both sheep and cattle. Except for a portion of a seeding all existing range developments have been excluded from the area and no new projects are currently proposed. The Park Range contains 2% of the manageable woodland for the Egan Resource Area. Although the area has useable forestry products, use in the past has been almost nonexistent because of the area's remoteness. There are no private inholdings within the wilderness study area. Refer to the Minerals and Energy section following this wilderness discussion.

Riordan's Well

The Riordan's Well Wilderness Study Area (57,002 acres) is about 50 miles southwest of Ely and includes a portion of the Grant Range. The portion of the Grant Range immediately south of the Riordan's Well unit is a U.S. Forest Service Presidentially endorsed wilderness area. Because the Forest Service proposal was so far along in the recommendation process the contiguous Riordan's Well unit was not studied along with the Forest Service's proposal, but was treated as a separate entity. Portions of the north and west boundaries are contiguous with the Blue Eagle Wilderness Study Area which was recommended preliminarily suitable in the Tonopah Draft Environmental Impact Statement (published in April, 1982). This wilderness study area is made up generally of gentle mountains and alluvial fans, with much of the area covered with relatively dense pinyon-juniper growth. The area is elongated along the north-south axis and is generally steeper and more dissected in the south. The alluvial fans around the perimeter of this wilderness study area are generally shrub communities. Heath Canyon on the west side of the wilderness study area is a highly scenic area due to its impressive dimensions.

Naturalness: Riordan's Well Wilderness Study Area is in a very natural condition. The northern end contains a few cherrystemmed routes and range improvements and the southeast benchland has several cherrystemmed routes. While these routes are technically excluded their use and presence impact the feeling of naturalness within their immediate area. There are no range improvements within the wilderness study area boundaries.

Solitude: Opportunities for solitude are outstanding within portions of the unit. The area is generally crescent shaped and relatively narrow in places. Topographic screening is very good in the core of the unit and only fair in the foothills. Vegetation screening varies from dense in the southern two thirds to only moderately dense in the northern third and along the eastern periphery. Vehicle use on the cherrystemmed roads in the southeastern benches and mining activity near the western tip could both impair solitude opportunities in these areas. The wilderness study area would provide solitude while sustaining general wilderness use. The remoteness of the area from population centers enhances opportunities for solitude.

Primitive Recreation: Good opportunities for hiking, backpacking and camping exist in Riordan's Well Wilderness Study Area although they are not considered outstanding. Approximately ten springs are within the wilderness study area and several streams flow out of the unit on a perennial basis.

Special Features: Riordan's Well Wilderness Study Area contains ponderosa pine, wild horses, raptor eyries, elk and bighorn sheep. Stands of ponderosa pine are unusual in the Ely District and have scientific value. They are also sought out by recreationists. The raptors are of interest to the scientist and naturalist, as are wild horses, bighorn sheep and elk.

Other Resource Values: Portions of five grazing allotments are within the wilderness study area. All existing range improvements have been excluded from the unit. There is one well proposed in the western portion of the unit administered by the Battle Mountain District. Riordan's Well Wilderness Study Area contains 4% of the Egan Resource Area's manageable woodland. Pinenuts and fuelwood have been taken from this area in the past, mostly by local ranchers since the area is remote with limited access. Refer to the Minerals and Energy section following this wilderness discussion.

South Egan Range

The South Egan Range Wilderness Study Area (96,916 acres) is about 25 miles south of Ely in the Egan Range. The wilderness study area situated in this north-south trending mountain range consists of rugged mountains, foothills and associated benchland. The west side of the area includes relatively flat bench which abruptly becomes extremely steep, culminating in scenic, sheer rock faces at the top of the mountains. The east side of the range slopes more gradually and does not exhibit the degree of rock outcropping found on the west side. The benchland on both sides of the area has several cherrystemmed routes. Four of these routes penetrate into the high plateau in the center of the area.

Naturalness: Large portions of the area, mainly in the high country in the north and south ends of the wilderness study area are in a very natural condition. The central portion of the unit is impacted by the presence of cherrystemmed routes and numerous cherry stemmed range improvements including fences and spring developments. The radio transmission structure on the southwestern edge just opposite the unit impairs one's feeling of naturalness while in its immediate vicinity.

Solitude: Outstanding opportunities for solitude are present in portions of South Egan Range Wilderness Study Area. The configuration is severely impacted by the cherrystemmed routes which create six bottleneck portions of approximately one mile each. Topographic screening varies throughout the unit ranging from massive limestone cliffs in the central third to open bowls between ridgetops in the southern third. The effective vegetative screening is dense and extensive in the northern third and dense and spotty in the southern two-thirds. Vehicle use of the cherrystemmed routes which extend into the interior could impair solitude opportunities in the high country. Portions of the area provide exceptional opportunities for solitude while sustaining general wilderness use.

Primitive Recreation: The South Egan Range Wilderness Study Area provides outstanding opportunities for recreation because of the diversity of activities such as hiking, hunting (deer and mountain lion), nature study, horseback riding, rock climbing, technical climbing and spelunking in Angel Cave. There are about 30 springs within the wilderness study area.

Special Features: This wilderness study area contains lithic scatters and high archaeological potential, Angel Cave, bristlecone pine, Gambels quail (unusual in the Ely District), elk, raptor eyries, massive limestone cliffs and other geologic values. According to the Nevada Division of State Parks, this area contains probably the best example in the Great Basin of a complete paleozoic sequence of geology. Angel Cave, Gambels quail, bristlecone pine and raptor eyries all have scientific and educational value.

Other Resource Values: Portions of eight grazing allotments are within the study area boundary. Except for one chaining and one seeding all range improvements have been excluded from the area. There are no new improvements proposed. The South Egan Range contains about 3% of the Egan Resource Area's manageable woodland. Residents of Lund, Preston and Ely have frequently used the area to gather Christmas trees and fuelwood. A portion (3,800 acres) of a prescribed burn is proposed within the South Egan Range Wilderness Study Area. A portion of a Desert Land Entry has been applied for within the South Egan Range Wilderness Study Area boundary. One private parcel and 40 acres of split estate land are surrounded by the Wilderness Study Area. Numerous private parcels are adjacent to the South Egan Range Wilderness Study Area. Refer to the Minerals and Energy section following this wilderness discussion.

Goshute Canyon

The Goshute Canyon Wilderness Study Area (35,594 acres) is located about 60 miles north of Ely in the Cherry Creek Range. It consists mostly of mountains, but includes benchland along the east and west boundaries. The mountains are steep, rugged and dissected with many canyons. Exchequer Peak rises to 10,542 feet. Mixed conifer and pinyon-juniper forest cover the mountainous slopes.

Naturalness: One would perceive most of the Wilderness Study Area to be in a natural condition. The primary exception is the southern boundary which has numerous mining developments adjacent to it. The mining activity would seriously impair one's feeling of naturalness while in its immediate vicinity.

Solitude: The Goshute Canyon Wilderness Study Area provides outstanding opportunities for solitude throughout most of the unit. This is based on the combination of size; rectangular configuration; excellent topographic screening; and good vegetative screening. Users within portions of this area would have excellent opportunities to avoid contact with others and find a secluded spot. Outside sights and sounds would seriously impact one's solitude only in the southern end where there is mining activity.

Primitive Recreation: The Goshute Canyon Wilderness Study Area provides outstanding opportunities for recreation. Several hundred spelunkers enjoy Goshute Cave each year. The unique fishing for Utah cutthroat trout in Goshute Creek is of interest locally. People come from throughout the state to hunt deer and grouse. Mountain lion hunting is also available. Because of the high scenic qualities, nature study, photography, hiking, backpacking and camping are all popular. In addition, crosscountry skiing and snowshoeing are viable activities within the upper basin.

Special Features: Goshute Canyon Wilderness Study Area contains outstanding scenery, an extensive stand of bristlecone pine, wild horses, archaeological sites, Goshute Cave, wildlife values (elk, spotted bat, Utah cutthroat trout and raptor eyries) and a portion of Goshute Canyon Natural Area. The scenery is rated "class A" through the Visual Resources Management scenic quality rating system. The extensive stand bristlepine has all age classes represented. The Utah cutthroat trout and Goshute Cave are of recreational and scientific value. The elk, spotted bat, raptor eyries and archaeological sites are of educational and scientific value.

Other Resource Values: Portions of four grazing allotments are within the study area boundary. All existing range improvements have been cherry stemmed out and no new projects are currently proposed. The potential exists to spray about 2,500 acres to remove mulesear, an undesirable plant species. The Goshute Canyon Wilderness Study Area contains about 1.2% of the manageable woodland in the Egan Resource Area. Woodland products have been gathered within the area by local ranchers and residents of Cherry Creek. There is one parcel of private land surrounded by the wilderness study area and seven parcels adjacent to it. Refer to the Minerals and Energy section following this wilderness discussion.

MINERALS AND ENERGY

Since minerals and energy will only receive significant adverse impacts in areas designated as wilderness; discussion on the affected environment for minerals and energy will be limited to the four wilderness study areas.

Goshute Canyon Wilderness Study Area - Geologically the Goshute Canyon area has a diverse origin as evidenced by the numerous faults and folds located within and adjacent to the Goshute Canyon Wilderness Study Area. The rocks present within the wilderness study area represent ages varying from paleozoic through quaternary. The rock types represented within the wilderness study area are limestones, dolomites, shales and other sedimentary rock types. The volcanic rocks represented are primarily of extrusive origin, but there are also some representing plutonic origin. Leases for oil and gas cover the northern tip and the foothill portion on the eastern side. Because of the mountainous nature of the area and the fact that there is no past production for oil and gas nearby, potential is believed to be low.

More than 150 mining claims are located within the Goshute Canyon Wilderness Study Area. Most of these are concentrated in the southern end of the unit. A second large claim group is located in the mountainous central portion. Mining interests in the southern end are primarily concerned with silver and tungsten, and in the central portion with disseminated gold.

Most of the wilderness study area is within the Cherry Creek Mining District which has produced significant amounts of ore for the past 120 years. Known production is valued at 80 million dollars in 1983 dollars. Metals produced include gold, silver, copper, lead, zinc, and tungsten. Several deposits have been depleted but significant potential remains in the less-intensively mined areas.

Two major geologic structures, the Black Metals and the Exchequer Faults located in the southern end of the study area, are the main locations for the deposits of gold, silver and base metals. Most of the claims in this zone are located along these structures. In the Paris Canyon area interest is centered on a jasperoid breccia which often contains disseminated gold.

Fifteen workers were employed directly by the mining industry in the Cherry Creek District in 1981. Individual prospectors not included in this number also have a significant interest in the District.

An area (5,700 acres) with high mineral potential was identified in the southern tip of the Goshute Canyon Wilderness Study Area. The southern half of the unit (18,700 acres), was identified as having moderate mineral potential. The remainder of the unit has low potential for mineral deposition.

Park Range Wilderness Study Area - Geologically, the Park Range is composed primarily of Tertiary volcanic units with occasional outcrops of Paleozoic sedimentary rocks. The entire wilderness study area is rated as having low potential for metallic minerals. There are no mining claims located in the area. Potential for oil and gas is low. A 6,000 acre portion in the northeast corner of the unit is leased for oil and gas. No known production of minerals or oil and gas has been reported in this area. A total of 22,230 acres of moderate geothermal potential have been identified.

South Egan Range Wilderness Study Area - Geologically, the South Egan Range Wilderness Study Area is diverse in both makeup and origin. The area includes limestones, dolomites, sandstones, shales and other sedimentary rock types. The area also displays various types of volcanic rocks. The rocks exposed represent ages varying from Paleozoic through Tertiary.

The Sheep Pass Formation is located in the central part of this wilderness study area. In other areas, this formation in combination with other geologic features is strongly indicative of energy resources. However, this occurrence of the formation has been drilled several times in White River Valley with no commercial shows. Because of this and the mountainous nature of the South Egan Range Wilderness Study Area, the South Egans is believed to have a low potential for oil and gas. Forty-six thousand acres of the wilderness study area are leased for oil and gas. The Ellison Mining district is partially within the northern tip of the wilderness study area. Copper, lead and zinc are the primary metals removed from the Ellison District, although quantities extracted have been very low. Because of past mineral production and geologic structures, 800 acres of high potential and 7,600 acres of moderate potential were identified in the northern portion of the unit. Within the Ellison District the princpal ore emplacement has been identified with tertiary age extrusive volcanic bodies.

Riordan's Well Wilderness Study Area - Geologically, the area is complex and is composed of limestones, dolomites, shales, alluvium and volcanics. Ages of these rock types vary from Cambrian to Quarternary. Because of the mountainous nature of the unit, oil and gas potential is believed to be low. Approximately 27,000 acres of the wilderness study area is leased for oil and gas. A thrust plate at the western edge of the area indicates potential for a jasperoid breccia. A 2,950 acre portion of this western tip is therefore believed to have moderate mineral potential. The remainder of the area has a low potential for metallic minerals. There are three mining claim groups within the wilderness study area consisting of about 90 claims. Mining operations in the vicinity of this wilderness study area are the Terrell and Nye mines about one mile outside the southwest boundary road. Mineral production from the Terrell mine is tungsten and from the Nye mine is fluorite. South of the wilderness study area in the vicinity of Quinn Canyon are several significant fluorite mining operations. Because of the nearby operations and the geologic structure within the wilderness study area it is felt that the most probable minerals that could be expected from within the wilderness study area are gold, silver, fluorite and tungsten.

SOCIAL ANALYSIS

Introduction

Approximately 96 percent of the land in the Egan Resource Area is public land managed either by the Department of the Interior, Bureau of Land Management, Bureau of Indian Affairs, or the Department of Agriculture. These lands are under multiple-use management for grazing, hunting, forestry, fishing, mineral extraction, rangeland, recreation and wildlife habitat. The Bureau is responsible for managing the majority (85%) of the land in the resource area.

Planning Issue Number 1

Historically, the vast majority of the private agricultural lands are used for pasture and rangelands, and as such, are considered as "base properities" for associated federal grazing privileges. Hay production accounts for about 80 percent of harvested cropland. Agricultural land is concentrated in the county's valleys especially Steptoe, Spring, and Newark Valleys, as well as in the Preston-Lund area.

Many of the ranchers in the resource area are generationally linked to the lands for they are decendants of the original land users who grazed livestock on the "open range." Because of these historical ties, they feel a certain possessiveness about the range. By and large, the ranching community supports the concept of multiple-use.

However, the ranchers strongly feel that the production of food and fiber should be the first priority and oppose the assignment of grazing areas to wilderness preservation, wild horse, or other uses that preclude livestock grazing.

They feel threatened by the enforcement of national public lands policies which they perceive have been developed by Eastern bureaucrats. In the local context, these seem impractical and appear to ignore rancher "rights", their investments and their dependence on public lands for their livelihood.

Ranchers in the resource area seem to share the same personal attitudes about Federal intervention in the livestock sector as do their counterparts in the adjacent Schell Resource Area. As stated in the Grazing Environmental Impact Statement prepared for the Schell Resource Area, "In general, feelings of powerlessness over land use decisions, a perceived lack of cooperation and sensitivity from management agencies, and the influence of external interests via legislation and access to higher levels of government have tended to create frustration, resentment, and alientation among the ranchers. These conflicts have contributed to the overall strong, but weakening, support among ranchers for the Sagebrush Rebellion and the desire to have control of lands closer to home." Although supporting the concept of the Sagebrush Rebellion, the ranching community, by and large, has voiced strong opposition to the administration's program of privatization of public lands, (A program designed to sell selected public lands in order to reduce the federal deficit.) Ranchers see this as a definite threat to their economic and personal survivability. They feel that outside interests with unlimited financial resources could outbid them for ownership of public lands that they have historically grazed. Although ranchers have been reassured by top administration officials that there will be no mass sell off of public lands, many Nevada rural residents still feel it is a distinct possibility and strongly oppose the program.

Planning Issue Number 2

Since 96 percent of the land within the Egan Resource Area is federally administered (85% by the BLM), many of the residents are dependent on continued access to those as well as to adjacent public lands for either their livelihood or their various recreational interests. Consequently there is a great deal of concern about and interest in maintaining the "status quo" in any public lands management proposals concerning those lands. Public lands management proposals or programs are viewed by these residents in terms of any changes in what they perceive to be the traditional and historic uses of public lands.

Some community residents feel that the community is federally landlocked. In the view of these residents, this limits community growth opportunities. These residents indicate that BLM control of surrounding lands deprives them of lands that would otherwise be available for industry, housing, or other developmental activities in support of community growth. These residents support the release of surrounding public lands in support of community growth.

Other residents, however, feel that while economic growth is desirable, that growth must not come at the expense of pre-empting public lands that have historically or traditionally been used for grazing, mining, or recreation and using those lands for other purposes.

The "Draft Community Needs Assessment" issued by Dames and Moore, (October 6, 1982) is a plan that was developed over a six month period by 150 citizens of White Pine County for the White Pine Power Project.

In that document, concerns were expressed over the issues of: promoting the annexation of developable BLM lands to accomodate family housing within the community of Ely; potential overcrowding of outdoor recreational facilities located on the public lands which may require the BLM to consider developing these sites; and agricultural issues involving the public lands such as the loss of availability of public lands resulting from development of the White Pine Power Project that will affect the agricultural producer's ability to utilize remaining ranch resources.

Other citizen concerns may become apparent on the issue of designation of utility corridors in the resource area. Utility corridor designation is an on-going community concern that has become more visible with the initiation of the White Pine Power Project. However, these concerns will be addressed in detail the the White Pine Power Project's Environmental Impact Statement. This document should be available in the fall of 1983.

Planning Issue Number 3

Residents of White Pine, Nye and Lincoln counties strongly value the relaxed rural social environment, the openness and unspoiled beauty of the natural environment, and consider this combination a favorable environment for raising families. While they see wilderness as preserving those values, they are also vitally concerned about the high rate of unemployment and feel that some development is desirable and necessary to improve the local economy. Many feel the wilderness study areas are already de facto wilderness and that their wilderness values will be preserved whether they are designated or not. In fact some believe that wilderness designation will result in "outside" visitors coming to the area and degrading the wilderness values present. Others feel that wilderness designation is necessary to preserve some of the land in the Great Basin for future generations, because wilderness values will not remain without designation.

Wilderness is seen by some as a subsidized, single user program, either prohibiting or placing certain restrictive constraints on traditional activities and personal freedoms. Of particular concern, are the restrictive constraints placed on those activities which have the potential of enhancing the local economic vitality, i.e., mining, oil and gas exploration, etc. There is a high mineral interest in the Goshute Canyon Wilderness Study Area where companies and individuals have been mining and exploring for years. Restrictions placed on mineral development and exploration are precieved as a factor, contributing to the continuation of the depressed economic conditions of White Pine County. Some residents feel wilderness designation could help promote tourism to the area and perhaps expand job opportunities in the service sector, thus giving a boost to the local economy.

Several ranchers have expressed concern that wilderness designation could negatively effect the range improvement program by placing restrictions on developments. Other ranchers support limited number of wilderness areas and feel that wilderness designation could have a beneficial impact to their operations.

Both those who support the wilderness program and those who oppose it expressed cautious uncertainty about the program and its future. They feel that future political administrations may alter the wilderness management policies and regulations. They cite other natural resource management policies that have fluctuated from administration to administration. This fear of change and the traditional Nevadan antipathy for federal government contributes to the opposition for the wilderness program.

Local Community

The success of ranching is not only viewed as important to the overall community from an economic and lifestyle point of view, but is also perceived as enhancing community stability as a result of many ranching families being generationally linked to the lands and thus to the community. Consequently, community views in many cases parallel ranching views as far as those views related to the use of public lands. Similarly, community views parallel ranching views as far as the federal presence in the state is concerned.

The Governor's Commission on the Future of Nevada conducted a statewide survey in

1979. The strong feeling in the resource area, the surrounding counties as well as the State as a whole was reflected in that survey when residents were asked to rank seventeen possible problem areas in order of importance. White Pine County residents ranked "Federal Government Regulation" second in importance; Lincoln County ranked it first in importance; and Nye County residents ranked it fourth. Statewide, residents ranked "Federal Government Regulation" ninth in importance.

Diverse community coalitions tend to join forces in support of the agricultural sector whenever proposed public lands programs are seen as a threat to that sector. The community views ranching "as central to the local lifestyle both in its contributions to the easy-going family-oriented, relaxed pace of life and its effects on the retention of open space, a relatively pristine natural environment, and diverse recreational opportunities." (Draft Schell Grazing EIS, USDI, BLM, Ely District Office, Ely, NV, 1982).

Regional and National

Regional and national comments on resource area public lands management proposals most often originate with external wildlife, wild horse and environmental interests. Wildlife groups are concerned about the protection of riparian areas and wildlife habitat; environmental groups propose grazing reductions to counter damage to the ecosystem and preserve and protect the soils, and wild horse groups oppose herd reductions without careful assessment of resource conditions and herd trends.

ECONOMIC ANALYSIS

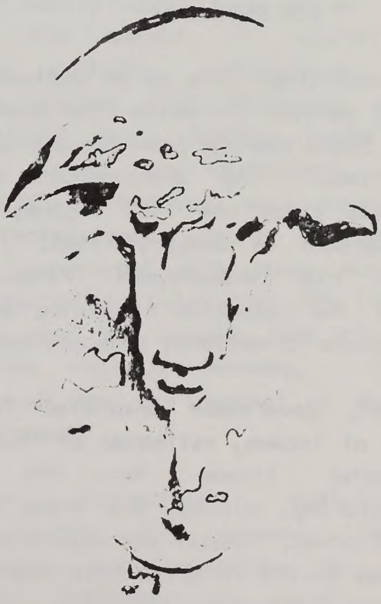
The Egan Resource Area includes the western two-thirds of White Pine County and small portions of northeastern Nye and northern Lincoln Counties. However, the affected environment, for purposes of economic analysis, is confined to White Pine County. Any potential for population, employment, or income effects beyond this area is negligible.

Population

White Pine County is predominately rural and sparsely populated with population density averaging about 0.9 persons per square mile. The reported 1980 population of 8,167 (Census) is projected to grow to 8,291 by 1990 and 8,410 by 2000 (Nevada State Planning Coordinator's Office), indicating an anticipated growth rate of slightly less than 3 percent over the 20-year period. These growth projections assume no substantial changes in the economic structure of the county, and no economic development. The implementation of the White Pine Power Project or any economic development activity, such as a resurgence of copper mining could substantially affect the number and character of the population.

Eighty-two percent (6,736 persons) of the county's population is concentrated in the City of Ely (4,882), Ruth (443) and McGill (1,411). A small segment of the population lives on ranches and mining settlements scattered throughtout the county.

The closure of the Kennecott copper mine between 1976 and 1978 has been the single most important influence on county population. Employment at Kennecott's operations fell from 1,600 in 1974 to 848 in 1977, a decline of 47 percent. This contributed to a net out-migration rate of 28 percent between 1970 and 1980, and an approximate 20 percent decline in White Pine County population from 10,150 in 1970 to 8,167 in 1980.



Income and Employment

Table 3-2 lists the sectoral and total income and employment and relative importance of each sector for the study area. Figures for 1980 show government, trade, services, and manufacturing to be the primary sources of employment.

TOTAL INCOME AND EMPLOYMENT IN 1980
WHITE PINE COUNTY

Table 3-2

	Employment		Income	
	Persons	Percent	($1,000)	Percent
Agriculture	198	5.2	1,590	2.8
Mining	337	8.9	7,860	14.0
Construction	244	6.5	5,896	10.5
Manufacturing	357	9.5	9,133	16.3
Trade	681*	18.1	7,475*	13.3
Services	524	13.9	5,907	10.5
Transportation and Public Utilities	264	7.0	5,689	10.2
Government	808	21.4	10,969	19.6
Other	358*	9.5	1,543*	2.8
Total	3,771	100.0	56,062	

Source: Regional Economic Information System, Bureau of Economic Analysis, 1982.

* BLM Estimates

The unemployment rate as of September, 1980 was 7.2 percent for White Pine County. The Nevada State average rate was 6.4 percent at that time. The unemployment rate has increased since the 1980 figure, reaching 12.0 percent in January, 1983. The more current high unemployment rates largely reflect the reduction of mining activities in response to national economic conditions.

In 1980, government predicted the major source of income, estimated at 19.6 percent of total income for the county. Manufacturing, mining, and trade followed, in that order. Annual per capita income for 1980 was $9,259 in White Pine County, while the State average was $10,723.

Affected Sectors

Livestock-oriented agriculture is the major basic industry to be affected by management proposals, although future mining activities are likely to be affected by land disposal and designation of Wilderness Areas. The economic potential from possible additional mineral extraction is unknown. No other sectors of the economy will be directly or significantly affected.

Most of the commodities purchased or sold by the mining and agricultural industries are imported and exported. The economic structure is relatively simple, with wholesale trade composed largely of outside purchases.

Agriculture

Agricultural production in the Egan Resource Area consists of alfalfa, cattle and sheep. Cash receipts from marketing in 1980 totaled $11.4 million in White Pine County, with $7.0 million from meat animals and other livestock and $4.4 million from crops.

Agriculture provided 5.2 percent of employment and 2.8 percent of income in White Pine County in 1980. While this ranks agriculture as the smallest economic sector in White Pine County, the viability and success of this industry remains tied to the public lands. Gross income for ranch operations in the area for 1980 is estimated at $5.7 million, with a total estimated net ranch income of approximately $2.8 million. Average net ranch income per AUM is estimated at $11.53.

Livestock have been using an average of 123,461 AUMs of public land forage in the Egan Resource Area. This accounts for about 46 percent of the total forage requirement and depicts the high average dependency on public land. Appendixes 10 (cattle) and 11 (sheep) describe the typical ranch budgets for operations in the area. Ranches have been classified by season of use rather than by size, as previous studies (Ulrich, 1980 and Torell, 1980) have proven that aggregating ranch operations by similar resource provides a more effective analysis than classification by size of operation. Two particular seasonal characteristics have been identified: (1) Federal range grazing, year-round, and (2) Federal range grazing, summer only. Only one budget has been developed for sheep operators because, of the 10 sheep operations in the resource area only 2 were identified as summer-only operations. These budgets have been adapted from a study by Resource Concepts, Inc. (1980) and from the Schell Grazing EIS (BLM, 1982).

Of the 52 active permittees in the resource area, 42 were identified as cattle operators, with 30 having permits for year-round use of BLM administered public range, and 12 classified as summer-only. Year-round operators typically sell weaner calves and maintain an average herd size of 473 head.

The majority of operators with BLM grazing permits for the summer only operate cow-yearling enterprises. Average herd size for these 12 operators totaled 117 head.

Six permittees run cattle and sheep operations and four permittees run exclusively sheep operations. Average head size for the sheep operations totaled 2,700 ewes.

Historically, the economic benefits derived by area ranchers from the use of public range have exceeded the fees they are charged. The existence of this imbalance, or "consumer surplus," has meant that ranchers are willing to pay extra for the opportunity to use public lands, thereby causing the grazing permit to acquire a market value (Vale, 1979; Neilson and Workman, 1971). The permits can be bought or sold in the market place, or used as collateral for loans (Corbett, 1978). Although not officially recognized as real property, Bureau of Land Management permits have nonetheless become an integral element in the capital and credit structure of area ranchers. Currently, the market value of federal animal unit months averages about $50 (Falk, 1980).

Permit market value is based upon active preference, which is the total number of animal unit months a rancher is authorized to use. Total grazing preference is 216,348 AUMs. At an average market value of $50 per AUM, BLM grazing permits, in themselves, contribute $10,817,400 to the wealth of area ranchers.

Lands

Potential changes in the proportionality between public and private lands would affect both the tax base and BLM payments to the county in lieu of property taxes.

Assessed valuation for White Pine County in the fiscal year 1980-81 amounted to $49,227,651. The tax rate per $100 of assessed valuation was 2.3322. BLM payments in lieu of property taxes for FY 81 amounted to $328,000.

Forest Products

Table 3-3 shows current demand and values, and projections for 1990, for all forest products currently harvested from the public lands. Revenues received by BLM from permit sales of these products, valued at the current fee, are expected to increase by thirty percent from $19,842 to $25,635 by 1990. Estimated total retail value of these products is expected to increase from $227,573 to $286,150 at current prices. No significant economic impact is expected to result from changes in the availability of forest products due to management actions proposed under any of the alternatives.

Wildlife and Recreation

The proposed action and alternatives would affect wildlife populations in some portions of the resource area. These population adjustments are expected as a result of alteration of habitat conditions, as well as changes in the amount of vegetation allocated to wildlife. Adjustments in wildlife populations will influence the number of hunter days, thereby impacting expenditures, income, and employment. An estimated 19,040 hunter days were expended pursuing affected game species in 1982. Expenditures associated with these hunter days are estimated to total $727,625 (1982 dollars) per year and provide $488,000 in income to the regional economy. This represents less than one percent of White Pine County income.

While other recreational activities contribute to the area economy, these activities are not expected to be significantly impacted and have not considered further.

Table 3-3

FOREST PRODUCTS
CURRENT USE AND PROJECTIONS FOR 1990
COMMERCIAL AND NON-COMMERCIAL SALES

	CURRENT USE					1990 PROJECTIONS*		
	FY 82 Sales (Units)	Permit Fee Per Unit ($)	Revenues Received By BLM ($)	Fair Market Value Per Unit ($)	Estimated Total Retail Value ($)	Demand (Units)	Estimated BLM Revenues ($)	Estimated Total Retail Value ($)
Firewood	791 Cords	$5.00	3,955	$75.00	59,325	1,162(1)	$5,810	87,150
Juniper Posts	1,564 Posts	.40	626	3.25	5,083	2,000	800	6,500
Christmas Trees	5,861 Trees	2.60(2)	5,861	15.00	33,915	3,300	8,625	49,500
Pinyon Nuts	47,000 Pounds(3)	.20	9,400	2.75	129,250	52,000	10,400	143,000
Total Values			$19,842		$227,573		$25,635	$286,150

(1) Based on the increase 1978-82.

(2) Average of individual use and commercial use fee.

(3) Highly variable - based on last good crop.

* Estimated 1990 revenues (calculated at 1983 prices).

FORESTRY

The forest resource of the Egan Resource Area consists of about 1.3 million acres of juniper-pinyon woodland and about 62,000 acres of mixed conifer stands at higher elevations. The common species are single leaf pinyon, Utah juniper, Rocky Mountain juniper, white fir, limber pine, bristlecone pine, and quaking aspen. There are scattered occurances of Douglas fir, spruce, cottonwood and ponderosa pine. The mixed conifer stands are small and scattered in mostly inaccessible areas and are considered non-commercials. Approximately one third of the woodland acres can be considered manageable. This amounts to about 409,616 acres.

UNITED STATES DEPARTMENT OF THE INTERIOR
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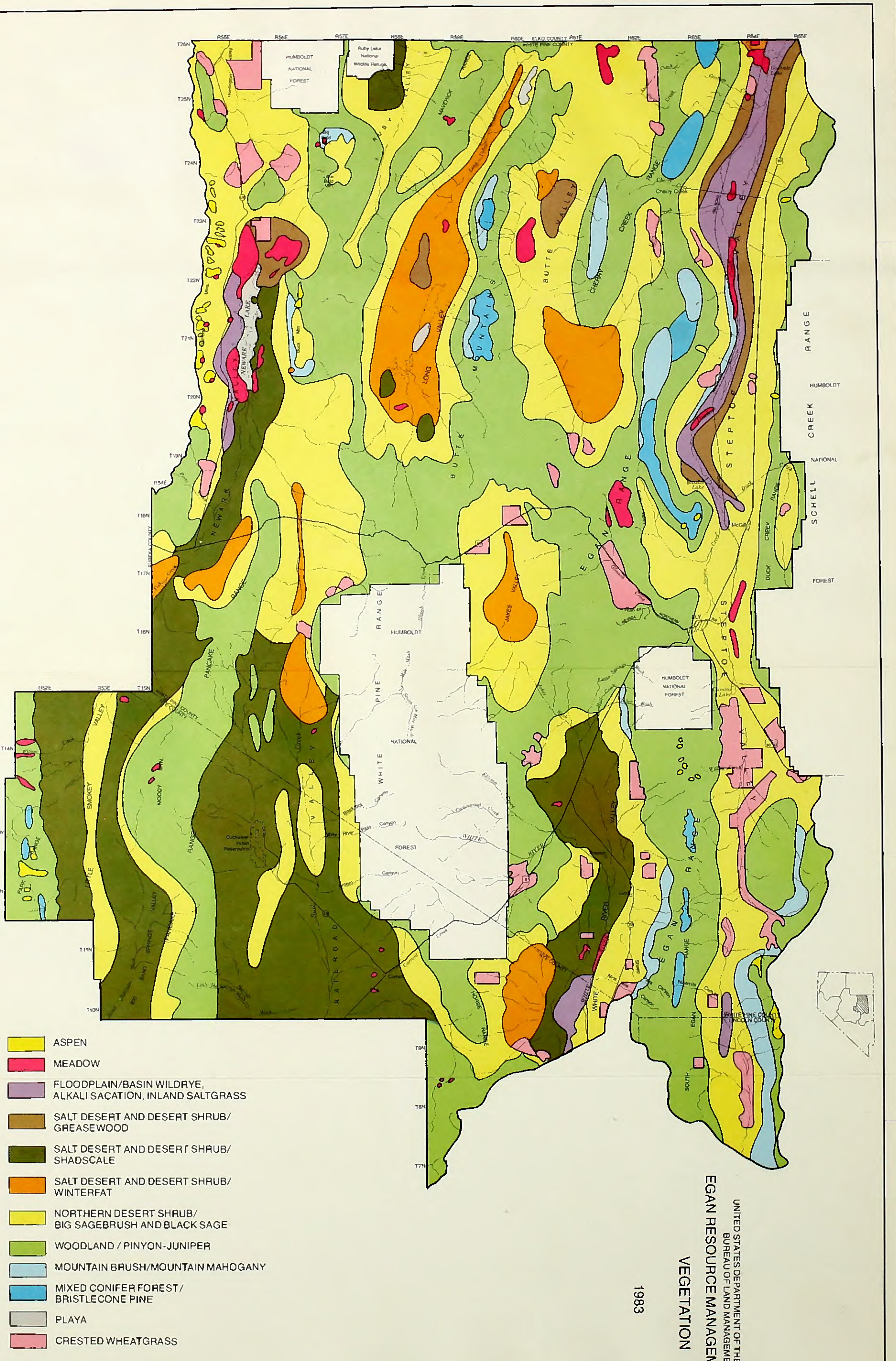
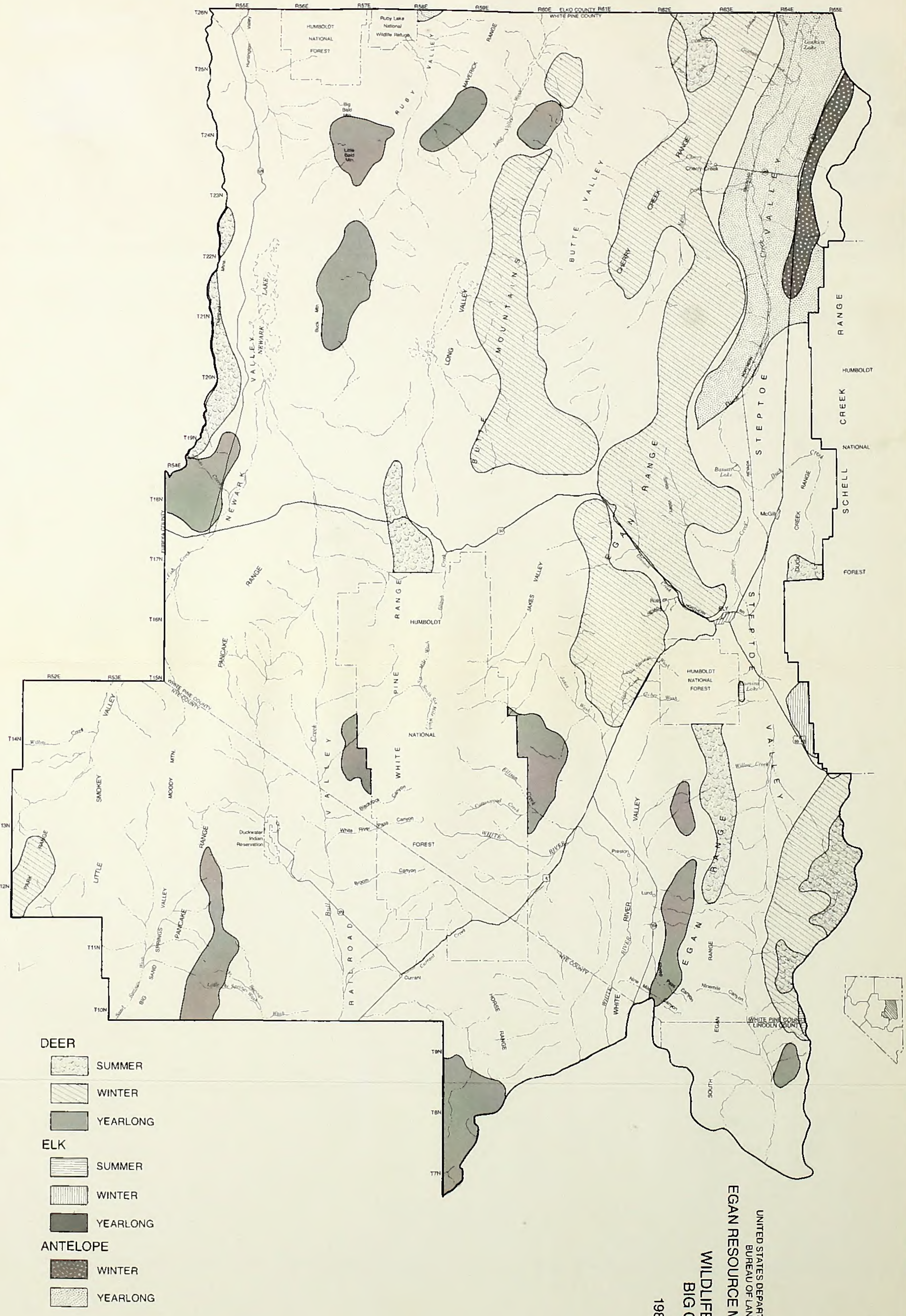
EGAN RESOURCE MANAGEMENT PLAN

VEGETATION

1983



- 🟨 ASPEN
- 🟥 MEADOW
- 🟪 FLOODPLAIN/BASIN WILDRYE, ALKALI SACATION, INLAND SALTGRASS
- 🟫 SALT DESERT AND DESERT SHRUB/ GREASEWOOD
- 🟩 SALT DESERT AND DESERT SHRUB/ SHADSCALE
- 🟧 SALT DESERT AND DESERT SHRUB/ WINTERFAT
- 🟨 NORTHERN DESERT SHRUB/ BIG SAGEBRUSH AND BLACK SAGE
- 🟩 WOODLAND / PINYON-JUNIPER
- 🟦 MOUNTAIN BRUSH/MOUNTAIN MAHOGANY
- 🟦 MIXED CONIFER FOREST/ BRISTLECONE PINE
- ⬜ PLAYA
- 🟥 CRESTED WHEATGRASS



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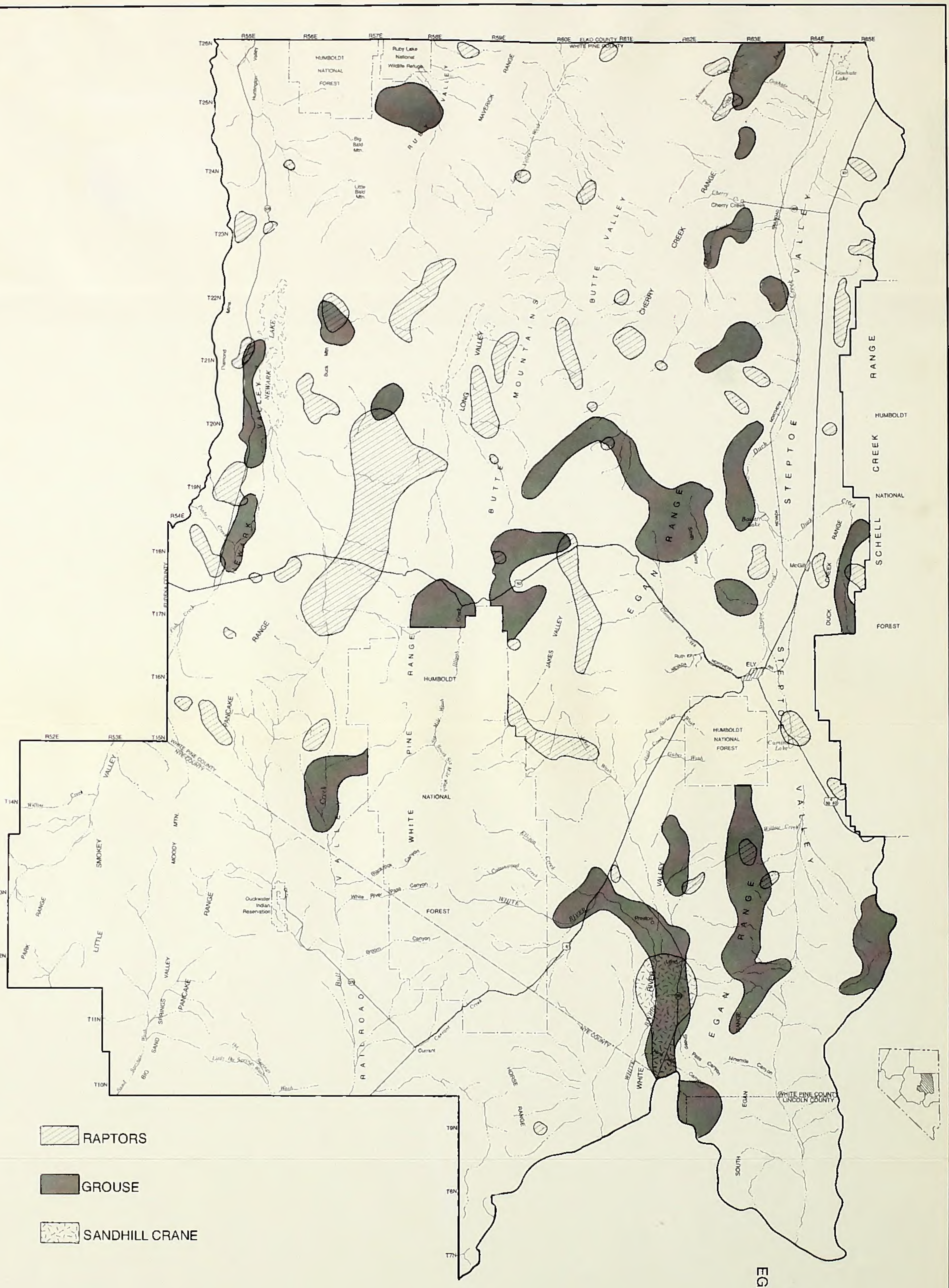
EGAN RESOURCE MANAGEMENT PLAN

WILDLIFE HABITAT
BIG GAME

1983



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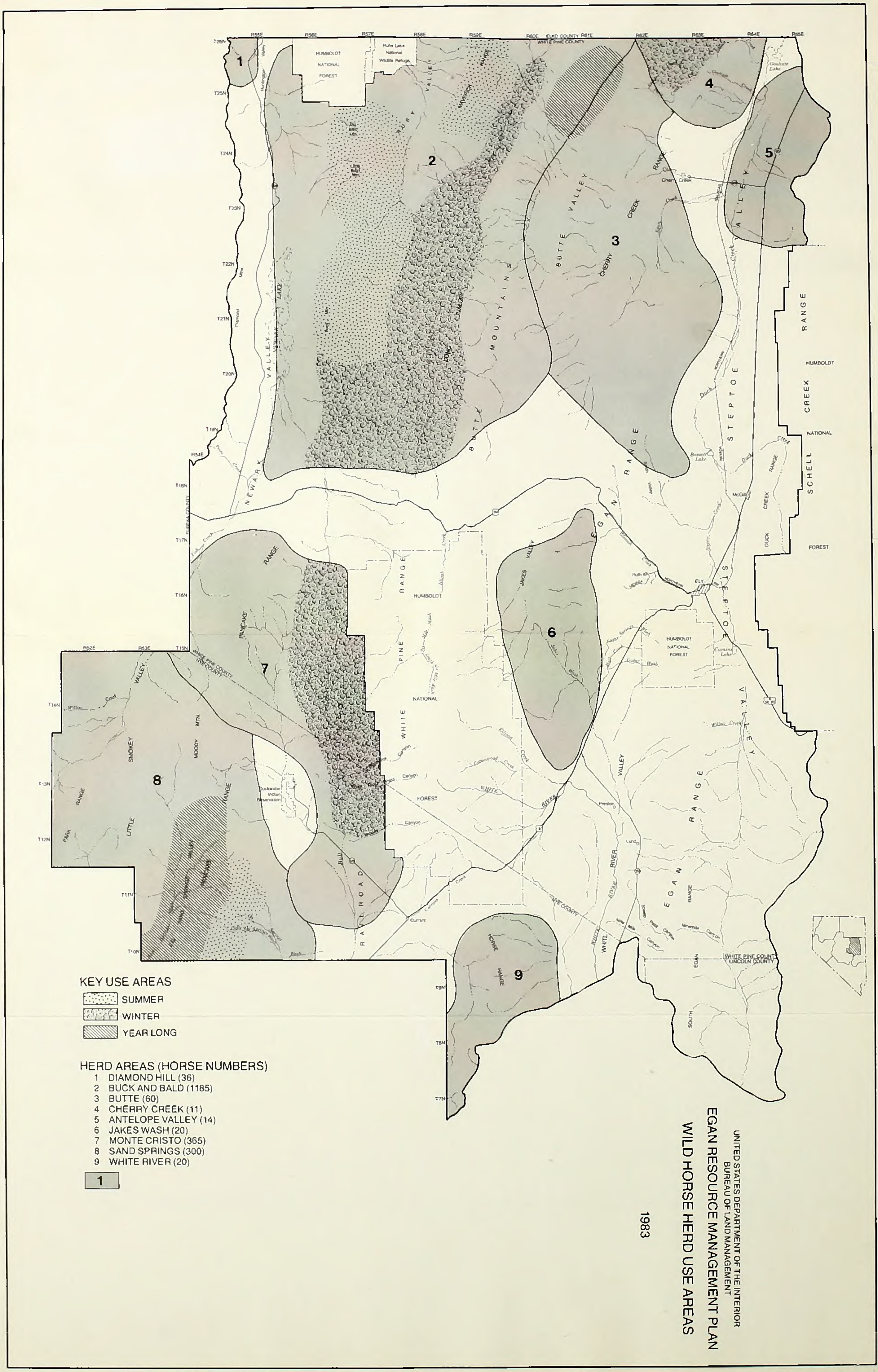
EGAN RESOURCE MANAGEMENT PLAN

WILDLIFE HABITAT
UPLAND GAME

1983



KEY USE AREAS

- ⠿ SUMMER
- ▩ WINTER
- ▨ YEAR LONG

HERD AREAS (HORSE NUMBERS)

1 DIAMOND HILL (36)
2 BUCK AND BALD (1185)
3 BUTTE (60)
4 CHERRY CREEK (11)
5 ANTELOPE VALLEY (14)
6 JAKES WASH (20)
7 MONTE CRISTO (365)
8 SAND SPRINGS (300)
9 WHITE RIVER (20)

▩ 1

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BUREAU OF LAND MANAGEMENT

EGAN RESOURCE MANAGEMENT PLAN
WILD HORSE HERD USE AREAS

1983

CHAPTER 4

ENVIRONMENTAL CONSEQUENCES

CHAPTER FOUR

ENVIRONMENTAL CONSEQUENCES

INTRODUCTION

This chapter presents the scientific and analytic basis for the comparison of alternatives discussed in Chapter 2. As directed in Section 1502.16 of the National Environmental Policy Act (NEPA) regulations for environmental impact statements.

In keeping with the directives of Section 1502.2(b) of the NEPA regulations, the discussions of the environmental consequences focus primarily on those impacts which are considered significant. Significance is determined through threshold values, which are discussed later in this chapter. The approach followed throughout Chapter 4 is to provide a detailed discussion of those impacts which are considered significant for each of the five alternatives, plus a brief discussion of the impacts which do not meet or exceed threshold values. Impacts to wilderness characteristics not discussed in this plan will be covered in the Egan wilderness technical report, a supplemental document. Knowledge of the area and professional judgement, based on observation and analysis of similar areas, has been used to infer environmental impacts where data is limited. Limitations on impact assessment occur where lack of available long-term data and detailed scientific data preclude an extensive analysis.

This plan is designed to be a comprehensive, long-range plan. Further, this plan is the broad management guide under which planning, environmental analysis, project design and specific decision-making will take place before actions occur. For example, wilderness decisions must go to Congress, an application must be filed on a powerline and are subject to an approval process, and competitive off-road vehicle events must have a permit. As a result, most impacts on resources and uses must be considered as potential risks and their significance judged accordingly.

The analysis which follows is thus designed to provide an overview of the direct and cumulative impacts of the alternatives to each management zone. The analysis addressess the impacts associated with particular types of projects and then compares the relative magnitude of the impacts that would result from the implementation of each alternative. Environmental analysis will be performed for all projects prior to approval, except for those covered under categorical exclusion, as provided under 516 Departmental Manual 6, Appendix S.

This chapter will also include the relationship between short-term use of man's environment and the maintenance and enhancement of long-term productivity and irreversible or irretrievable commitment of resources. Actions committing future generations to continue a similar course are considered irreversible. Irretrievable is defined as not replaceable. The standard operating procedures (see Chapter 2) incorporate what are normally considered to be mitigating measures. Therefore, all adverse impacts can be considered as unavoidable.

Impacts to air quality, soils, and ground and surface water are not considered to be significant and will not be discussed further. Threatened and endangered species and cultural resources are protected by various laws and standard operating procedures and will be managed accordingly.

ASSUMPTIONS AND ANALYSIS GUIDELINES

To facilitate the process of analyzing impacts of each alternative and to help give each reader some background into thought processes, the following assumptions have been made:

1. Implementation of the selected alternative would begin in the fall of 1984, with short-term actions being completed within five years. Wilderness decisions would be made by Congress at a later date.

2. BLM will have funding adequate for implementing the selected alternative.

3. Short-term impacts are defined as those which would occur with the five-year time frame anticipated for implementation. Long-term impacts are those which would occur from five to twenty years.

4. Analysis will include the range of probable impacts in most all instances. A worst case analysis however, will be used in analyzing impacts to access and other areas where (1) the information relevant to adverse impacts is essential to a choice among alternatives and (2) information essential for analyzing those impacts is not available.

5. The standard operating procedures set forth in Chapter 2 will be closely followed in implementing the selected alternative. Impacts which will be mitigated through these procedures will not be discussed.

6. Baseline data for vegetation, wildlife, wild horses, realty, wilderness, and other parameters is the best available. Data was extrapolated when necessary to cover areas for which no data was available.

7. Some public demand to convert public lands to private ownership will continue to increase due to continuing urban expansion needs, widespread interest in agricultural development, and continuing emphasis on land sales through Section 203 of the Federal Land Policy and Management Act of 1976.

8. Demand for utility and transportation rights-of-way will increase and be met as the White Pine Power Project is completed and as electrical power demands for community expansion and agricultural development necessitate more transmission lines.

9. The short-term for wilderness is the five year period following a congressional decision on a wilderness study area. The long term is the time after those five years.

10. Lands recommended as suitable for wilderness preservation will be designated by Congress.

11. Lands eventually designated by Congress as wilderness areas will be withdrawn from mineral entry, except for valid rights existing at the time of designation.

12. Lands recommended as nonsuitable for wilderness preservation will eventually be released from wilderness review by Congress and will be managed under standard BLM multiple use guidelines.

13. Riparian and stream habitat presently declining and not proposed for a change of management will continue to decline at present rates.

14. Discussions with ranchers during the spring of 1983 are a representation of current views held by some users of public lands.

15. Manageability of the pinyon-juniper woodlands is limited to areas of less than 30% slope. Under this criteria, one third (409,616 acres) of the total woodland acres is available for management. A total of 25,929 acres have been withdrawn for other uses and 798,440 acres are unavailable due to slope.

16. The pinyon-juniper habitat type extends through a broad range of micro-climates, from the lower elevation dry alluvial fans to the higher elevation, more moist sites. In the lower dry sites, this habitat is represented almost solely by juniper. On the upper, more moist sites, however, the pinyon tends to dominate the site. It is on these lower, dry juniper areas that the vegetation conversion projects would occur. The sites composed of a pinyon-juniper mix would be left as woodlands and managed accordingly.

17. For lands actions, acreage within the pinyon-juniper type which are considered for disposal will be treated as manageable. Power line corridor construction will be assumed to affect fourteen acres per mile of corridor.

18. Demand for woodland products, particularly fuelwood will continue to increase.

19. A fire management policy of limited control will affect 25% more acres than current suppression policy. The average acreage burned is 326 acres per year. This average does not include castastrophic burns (2,000 acres or more) which seem to occur once in each decade.

20. Current off-road vehicle (ORV) use within the area is generally restricted, by user choice, to existing roads and trails. Topography, terrain and vegetation effectively eliminate ORV use on much of the area. In addition, the existing roads and trails provide access to many backcountry areas and the roads and trails provide the variety of challenge sought by many enthusiasts. ORV use is low in comparison to the size of the area. Use is estimated at 8,000 visitor hours per year. Little damage is known to be occurring from the current levels of use or from the current use patterns. Therefore, it is assumed that there are currently no significant impacts from off-road vehicle use within the Egan Resource Area.

21. Public lands shall remain open and available for mineral exploration and development unless withdrawal or other administrative action is clearly justified in the national interest. The multiple use management decisions recognize that mineral exploration and development can occur concurrently or sequentially with other resource uses. Mitigation measures, stipulations and operating procedures may be incorporated into implementation actions. It is further recognized that land use planning is a dynamic process and decisions will be updated as new data are evaluated.

DETERMINATION OF SIGNIFICANT IMPACTS

To assist in determining if impacts are significant, threshold values have been established for each resource. When an impact meets or exceeds a predetermined threshold, that impact is said to be significant. If the threshold is not met, that impact is deemed to be not significant. Thresholds are determined by the individual resource specialist, who uses professional judgement, and may also be influenced by law, regulation, and public opinion. In some disciplines existing condition is the baseline that separates beneficial from adverse impacts and maintaining the current situation results in no significant impacts. The following thresholds have been developed to measure the significance of impacts.

Vegetation

1. A significant impact occurs when there is a change of 10% or greater in the existing successional stages moving toward or away from the desired level of management either by zone or the entire resource area.

Essentially this is a measure of trend as it is related to management objectives identified in relation to the uses proposed and the corresponding estimated vegetation composition.

Stream Riparian Habitat

1. A significant impact occurs when there is a change of 10% or greater of the existing condition class (habitat inventory) either by zone or the entire resource area.

Livestock

1. A significant impact occurs when there is a change of 10% or greater in the three-year averaged license use (existing levels) of livestock either by zone or the entire resource area.

2. A significant impact will be considered to have occurred if there is a disruption in the current livestock management practices on 10% or more of the allotments, either by management zones, or by the entire resource area.

Wild Horses

1. Any action which results in a change in wild horse numbers in a herd use area which is greater than 10% of current numbers is a significant impact.

2. Reducing or maintaining a herd population below 50 animals is a significant adverse impact. This is the level at which age structure and sex ratio factors would make herd viability difficult to maintain.

3. Any action which results in a loss of an area which constituted a wild horse area in 1971 is a significant adverse impact.

4. Any action which results in an interference or enhancement of normal distribution and movement patterns of the majority of wild horses is considered a significant impact.

5. Any action which results in a death loss of animals during capture operation that is greater than 2% is a significant adverse impact.

6. Any action which results in the elimination or enhancement of existing animal characteristics, qualities or traits is considered a significant impact.

Wildlife

1. A significant impact occurs when either (a) there is a change of 15% or greater in the population of any big game species either by zone or the entire resource area.

2. A significant impact occurs when there is a change of 10% or greater in density of any small game species either by zone or the entire resource area.

3. A significant impact occurs when there is a change in density of 20% or greater of any upland game species either by zone or the entire resource area.

4. A significant impact occurs when there is a change of 10% or greater in the distribution (use area) of any nesting raptor species either by zone or the entire resource area.

5. Any action which would affect the potential to reintroduce native wildlife species is considered a significant impact.

Realty Management

1. An increase of 15% in the amount of private land in any zone would be significant impact.

2. A significant impact occurs when there is a change in the status quo of utility corridors currently existing, either by zone or the entire resource area.

Wilderness

1. Designation of an area as wilderness is considered to be a significant beneficial impact if it would preserve mandatory wilderness characteristics (size, naturalness, opportunities for recreation or solitude) that would be lost without designation. A significant adverse impact occurs when an area will lose any one of these mandatory characteristics such that it would no longer qualify as a wilderness study area.

Minerals and Energy

1. A significant impact occurs when 5,000 acres or more of high mineral or energy potential is withdrawn from mineral entry or leasing due to wilderness designation in the Egan Resource Area; or when 10,000 acres or more of moderate potential is withdrawn.

Forestry

1. A significant impact occurs when there is a change of 15% or greater in the acreage of manageable woodland currently existing, either by zone or the entire resource area.

Recreation

1. A significant impact occurs when there is a change of 10% or greater in the number of recreation visits in the entire resource area.

Social Conditions

1. A significant community impact occurs when there is a 10% or greater in migration or out-migration of people from the resource

area. Any deviation from the status quo at the individual level will be considered to be a significant impact.

Economics

No objective measure of what represents a significant impact is available. Therefore, for purposes of economic analysis, the following thresholds, based on professional judgement, are assumed:

1. A 5 percent change in net ranch income.

2. A 10 percent change in rancher wealth.

3. A 5 percent change in the employment or sales of any economic sector.

4. A 1 percent change in total study area.

Energy and Minerals

1. A significant impact occurs when 5,000 acres or more of high energy or mineral potential is withdrawn from mineral entry or leasing due to wilderness designation in the Egan Resource Area; or when 10,000 acres or more of moderate potential is withdrawn.

Visual Resources

1. A significant adverse impact occurs when cultural modifications have a net negative impact to visual resources within a wilderness study area, according to Visual Resource Management scenic quality inventory and evaluation analysis.

Cultural Resources

1. The threshold would be destruction of scientifically or educationally valuable sites.

PREFERRED ALTERNATIVE

VEGETATION

1. The successional stages of the various plant communities would move toward the desired levels of management.

In all zones there would be insignificant beneficial impacts to vegetation as short-term management actions encourage a more even utilization of forage.

In the long term, significant beneficial impacts to vegetation would be brought about by both short and long-term management actions.

Significant beneficial impacts are shown in Appendix 13 as the successional stages move toward the desired levels of management.

Licensing livestock use at the three-year average licensed use in the short-term and adjusting grazing use through monitoring to achieve sustained-yield utilization levels would benefit vegetation by improving areas of over-grazing. Although adjustments in grazing use and changes in season of use are expected, monitoring data is not available at this time with which to project the magnitude of the adjustments in this plan.

One of the main objectives of proper livestock management is to increase available forage use while improving ground cover, species composition, plant vigor, and density. These changes would be brought about, in part, by various range improvements.

The physiological needs of plant species would be met by implementing proper grazing management plans and range improvement projects. The various plans and projects would promote vigor and seedling success of forage species by rest and deferment, promote seed planting of forage species by the mechanical action of animal movement following deferment, reduce effects of repeated overuse of preferred areas that commonly occur with continuous grazing, and increase animal productivity as a consequence of increasing forage production.

Water developments would improve the distribution of livestock. Uniform utilization of the range and rest during critical periods of growth reduces the effects on plants due to year-long and overgrazing.

Vegetation conversion would provide additional vegetation for grazing during the critical spring growing season. Reducing utilization levels on the native vegetation during the spring growing season would allow the vegetation to improve, and at the same time increase the total amount of forage available for grazing.

LIVESTOCK GRAZING

1. Present licensed use would increase.

This alternative proposes that livestock use in all management zones would continue at the three year average licensed use (123,461 AUMs). These livestock levels are as follows: management zone 1 is 27,738 AUMs or 48% of preference; management zone 2 is 43,529 AUMs or 56% of preference; management zone 3 is 36,899 AUMs or 64% of preference; management zone 4 is 2,822 AUMs or 37% of preference; and management zone 5 is 12,473 AUMs or 81% of preference. Therefore, in the short term there would be no significant impacts to livestock operators in any of the management zones. In the long term, however, vegetation would move toward a desired level of management due to the implementation of various management actions, including livestock management and range improvement projects. Water developments required in the implementation of grazing systems and allotment management plans would make additional AUMs available to livestock, since it would result in more even livestock distribution. 20,200 acres of vegetation conversion, primarily crested wheatgrass seedings, would provide additional forage as a direct result of the seeded grasses.

In addition to the construction of various range improvement projects, grazing systems, an integral part of any allotment management plan, would be implemented. Grazing systems may require greater stocking rates on smaller portions of the allotment. This increased utilization in the grazed area allows the ungrazed areas to rest while providing more even utilization of the vegetation in the grazed areas. The plants in the ungrazed areas are allowed to increase vigor, storage and reproduction which leads to increased production the following year. These positive aspects of rest outweigh the increased utilization in the grazed years (Shiflet and Heady, 1971; Hickey, 1971). Based on a review of grazing systems in the western states by Van Poolen and Lacey (1979) and the professional judgement of the resource area staff, it is estimated that a ten percent increase in AUMs would be realized through implementation of grazing systems and allotment management plans.

Range improvement projects which benefit livestock would account for nearly 4,747 AUMs increase, which would result in the projected long-term livestock use levels up to 128,208 AUMs. A ten percent increase in AUMs resulting from the implementation of grazing systems, over the long-term, would amount to an additional 12,346 AUMs. A portion of this increase would be available to livestock and this would result in a significant beneficial impact to livestock operators.

2. Livestock management problems would occur as a result of land disposals.

This alternative proposes the eventual disposal of public land in 34 grazing allotments, totaling some 79,888 acres. This would affect 43 lvestock operators. If these lands are acquired by someone other than the livestock operator in the affected allotment, a significant adverse impact to that livestock operator could result. These impacts would be both short and long term and are expected to be of a lesser magnitude under this alternative than under alternative D, but of a greater magnitude than those under alternatives A and B.

3. Added costs to livestock operators would occur because of wilderness designation.

With wilderness designation, all access routes determined to be roads and noticeable ways, which were cherry stemmed during the BLM's wilderness inventory, would remain open to all vehicle traffic. All existing range improvements have access to them.

New range developments will only be permitted when they will better protect the rangeland or the wilderness resource. Costs of new developments will be higher in wilderness areas than outside because of the emphasis placed on use of the least impairing construction methods and most environmentally compatible materials. Cost increases will be within reason. There are currently no range projects proposed in the suitable portions of the wilderness study areas.

WILDLIFE

1. Numbers of big game would increase.

In the short term, big game numbers will increase slightly. This is an insignificant beneficial impact. The slight increase in numbers will be due primarily to an increase in vegetation. The increase in vegetation will result from better livestock distribution through the implementation of grazing systems and the construction of range improvement projects. Several projects will be constructed to benefit wildlife and these will provide an additional 6,435 AUMs of forage.

In the long term, big game numbers will increase significantly due to an increase in vegetation and the construction of range improvement projects. It is estimated that a ten percent increase in AUMs, approximately 12,346 AUMs, would be realized through the implementation of grazing systems (Van Poolen and Lacey, 1979). A portion of these AUMs would be available to wildlife. This, plus the additional 6,435 AUMs resulting from range improvements, would result in a significant beneficial impact to livestock over the long-term.

2. Big game herd distribution would increase.

In the short term, big game distribution density within use areas will increase insignificantly. The proposed guzzlers and various other water projects bringing free water into areas lacking free water will make forage available that was not prior to the project. With monitoring and adjusting livestock and wild horses accordingly to achieve proper utilization of key forage species, big game distribution and density within use areas will significantly increase.

3. Distribution of small game species would increase.

In the short term, small game species distribution will increase insignificantly. Small game species are generally tied to both stream and other riparian areas. With monitoring and adjusting wild horses and livestock to achieve proper utilization of key forage species, riparian areas will improve. In the long term stream riparian will move toward the desired condition class and other riparian vegetation will move one successional stage toward the desired (see Appendix 13). Small game species distribution and density will significantly increase.

4. Distribution of upland game would increase.

In the short term, upland game species will increase in distribution. Proposed guzzler installation, other water projects along with monitoring and adjusting wild horses and livestock to obtain proper utilization of key forage species, will make available more grasses and forbs essential for upland game specie maintenance. In the long term, upland game species distribution will increase significantly.

5. Distribution of nesting raptors would increase.

In the short term, nesting raptor species will remain static with possibly a slight increase. In the long term, nesting raptors will increase significantly. Proposed grazing systems with a rest pasture rotation cycle in pastures with aspen vegetation types will move the aspen toward the desired successional stage. Aspen regeneration will become established and more mature clones of aspen will be available for nesting buteos, owls and accipters.

6. Stream riparian habitat would increase in condition class.

In the short term, stream riparian habitat will remain in the same condition class it presently is in. In the long term, stream riparian habitat will remain the same or move toward a better condition class than it is presently. This may be accomplished by utilizing rest pasture rotation grazing systems in pastures with stream riparian areas present. Season of use adjustments may also be utilized to allow riparian areas to collect and store more plant resources.

7. Reintroductions of native wildlife species would be supported.

In the short term, reintroduction of native wildlife species will be supported on a case by case basis. Where monitoring shows forage is adequate for the proposed species to be reintroduced, the reintroduction of the specie will be supported. In the long term, after monitoring and adjusting livestock and wild horses to obtain proper utilization, reintroductions of native wildlife species will be supported in all zones.

WILD HORSES

1. Wild horse numbers would not decline.

In the short term, wild horses will increase slightly. This is an insignificant beneficial impact. The slight increase in numbers will be due primarily to an increase in vegetation. The increase in vegetation will result from better livestock distribution through the implementation of grazing systems and the construction of range improvement projects.

In the long term, wild horse numbers will increase significantly due to an increase in vegetation and the implementation of grazing systems. It is estimated that a ten percent increase in AUMs, approximately 12,346 AUMs, would be realized through the implementation of grazing systems (Van Poolen and Lacey, 1979). A portion of these AUMs would be available to wild horses. This would result in a significant beneficial impact to wild horses over the long term.

2. Herd viability would decline.

There will be no significant impacts except for zones 4 and 5. In these two zones there will be significant adverse impacts. Horses will be maintained at a level which herd viability is difficult to maintain, thus the potential exists that the herds in these two zones may be lost.

3. The free-roaming nature of wild horses would be preserved.

There will not be a significant impact to the free movement of wild horses in any zone. No actions will be taken that will interrupt or change the migration or other movement of the majority of wild horses.

4. Areas where wild horses existed in 1971 would be preserved.

There will be no significant impact in any zone. All wild horse areas which were inhabited by wild horses in 1971 will continue to be managed as wild horse areas.

5. Death loss during capture operations would not exceed two percent.

There will be no significant death loss impact in any zone during wild horse gathering operations. Historically death loss during gathering operations has been less than two percent in the Ely District. During gathering operations it is anticipated that some horses will be destroyed for reasons other than the gathering operation itself. These reasons would include disease, age, and pre-existing injuries. Few wild horses are actually injured during gathering operations.

6. Existing wild horse characteristics or traits would not be eliminated.

There will be no significant impact on wild horse characteristics or traits in the Egan Resource Area. The random removal of wild horses will insure that no wild horses with specific characteristics or traits are pre-selected for removal.

REALTY MANAGEMENT

1. Community expansion and agricultural development needs would be accommodated.

The disposal of up to 79,888 acres over the long-term (20 years) would result in a transfer of up to 4,000 acres per year to meet demands for land for a variety of purposes. Refer to Table 4-1, Preferred Alternative, for estimated acreage by land use classification: residential, commercial, etc. Refer to the Lands and Wilderness (Preferred Alternative) Map at the end of Chapter 2 for the lands identified for potential transfer. It should be noted that, because of the small scale, these maps are for general location only and should not be considered completely accurate.

The small rural commuities of White Pine County are surrounded by Federal land and private land available for development is relatively limited. Any substantial increase in the size of the communities or the amount of agricultural land is dependent upon the availability of federal land. In the short term community expansion and agricultural development would not be affected. Over the long term there would be no significant effect on community expansion and agricultural development in zones 1 and 4. This is because no communities exist and the potential for additional irrigated agricultural development is insignificant. It is expected that the anticipated agricultural development possible in zones 2 and 5 can be accommodated, (BLM, U.S.D.I. Study), resulting in a significant beneficial effect over the long term.

Over the long term there would be no significant effect on community expansion in

Table 4-1

Pool of Lands Identified for Disposal

Land Use Class	Preferred	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Residential	20,359	0	7,312	20,359	23,399	7,312
Commercial	840	0	0	840[2]	840[2]	0
Grazing (Unimproved)	24,341	0	12,057	24,341	19,043	12,057
Alfalfa (Irrigated)	39,841	0	15,500	39,841	56,868	15,500
Grass Seeding (Dryland)	913	0	712	913[2]	7,855	712
Industrial	1,714	0	1,714	1,714[2]	1,714[2]	1,714
Recreation & Public Purposes	3,760	0	2,260	3,760[2]	3,760[2]	2,260
Totals	79,888	0	39,555	79,888	113,479	39,555

[1] Up to acreage amounts given.

[2] May exceed amounts given.

zones 2 and 5 because sufficient private land exist adjacent to the small communities to meet nearly all community expansion needs. Should any federal land be needed for community expansion it would be accommodated resulting in a slightly beneficial impact.

In zone 3, there is anticipated to be some community expansion over the long-term which would need federal lands to meet some of the growth. It is expected that there would be a slightly beneficial effect on community expansion as any needs for federal land will be accommodated.

Over the long-term the amount of land suitable for agricultural development in the Steptoe Valley, part of zone 3, is not anticipated to be significant. This is because of the expected allowance of most if not all surplus ground water by the State Engineer for preferred non-agricultural uses associated with community expansion, industrial development, and planned agricultural development of existing private lands. Thus, the effect of allowing only small amounts of federal land in this part of zone 3 for irrigated agricultural development is expected to be only slightly beneficial. However, there are some federal lands anticipated to be developed for irrigated agricultural development in the White River Valley area of zone 3 over the long term. This would result in a significant beneficial effect over the long term if this is the highest and best use of the surplus ground water available for appropriation. There would be some increase in the need for utilities, roads, and services.

2. Utility and transportation companies would benefit from long-range planning for major facilities.

Rights-of-way applications are presently processed on a case-by-case basis, with little thought given to long-range utility corridor planning. This method leads to a disorderly and unplanned pattern of rights-of-way on the landscape, more often than not, almost precisely in the location of the original application. Many times the granting of the right-of-way is slowed down, while potential impacts are mitigated. This is time consuming and inefficient for both the BLM and the applicant. This lengthy application process and the uncertainty as to whether the right-of-way will be granted does not benefit utility and transportation companies and hinders development of accurate long-range plans.

It is anticipated that two utility and transportation corridors would be designated, one running north and south, and one running east and west. Three would be planned, two running north and south and one east and west. These corridors would accommodate both the short and long range plans of the utility industry for major facilities. This would be significantly beneficial to the utility industry.

However, over the short- and long-term, the South Egan Range Wilderness Study Area and the Mt. Grafton Wilderness Study Area pinch off a planning corridor where it enters Cave Valley and thus eliminates this route from further consideration.

WILDERNESS

Portions of three wilderness study areas would be recommended as suitable for wilderness. Wilderness values would be protected in these portions but would be lost over the long term in portions of two wilderness study areas, and in all of the South Egan Range Wilderness Study Area.

Recommended Acreage

WSA	Suitable Acres	Nonsuitable Acres
Goshute Canyon	22,225	13,369
Park Range	46,831	437
Riordan's Well	37,542	19,460
South Egan Range	0	96,916
	106,598	130,182

Refer to the Lands and Wilderness (Preferred Alternative) Map at the end of Chapter 2 for the recommended wilderness areas in this alternative. It should be noted that, because of the small scale, these maps are for general location only and should not be considered completely accurate.

Wilderness values would be preserved in the northern 60 percent of the Goshute Canyon Wilderness Study Area (including 5,009 acres of the Goshute Canyon Natural Area which is an Instant Study Area). Wilderness values would also be preserved in the central core of Riordan's Well Wilderness Study Area and in virtually all of the Park Range Wilderness Study Area.

Wilderness values would be lost over the long term throughout the South Egan Range Wilderness Study Area and in portions of the Goshute Canyon and Riordan's Well Wilderness Study Areas.

Wilderness designation of any Egan Resource Area wilderness study area would enhance the National Wilderness Preservation System by expanding its ecosystem diversity. The Great Basin Sagebrush and Juniper-Pinyon Woodland ecosystems both are under-represented within the current designated wilderness. However, 8 million acres in Nevada are under consideration for wilderness designation; some of which would include representation of these ecosystems.

Designation of any Egan Resource Area wilderness study area would help balance the geographic distribution of wilderness. Currently, only one designated area exists in Nevada and one in Utah.

Designation of the Goshute Canyon Wilderness Study Area would improve the opportunities for wilderness recreation within 5 hours driving time of Salt Lake City/Logan Standard Metropolitan Statistical Area (SMSA) and Provo/Orem Standard Metropolitan Statistical Area. The Riordan's Well Wilderness Study Area is within a 5 hour drive of the Las Vegas Standard Metropolitan Statistical Area. The Park Range unit is not within a 5 hour drive of any Standard Metropolitan Statistical Area.

Wilderness designation would result in beneficial (but insignificant) impacts to wildlife visual resources, recreation, wild horses and watersheds in all suitable areas. Limitations on surface disturbance would protect wildlife habitat, wild horse habitat, visual resoures, watersheds and preserve a natural environment for primitive recreation. Cultural resources would experience insignificant positive and negative impacts which would be offsetting.

Negative impacts to the wilderness values are as discussed under Alternative A. The discussion would apply only to the unsuitable acres in the Goshute Canyon and Riordan's Well Wilderness Study Areas and for the entire South Egan Range.

Manageability

All three of the areas recommended suitable can be effectively managed to preserve their wilderness characteristics. Boundaries were adjusted in this alternative to remove manageability conflicts.

Conclusion

Preserving the wilderness characteristics of the Goshute Canyon and Riordan's Well Wilderness Study Areas would be a significant beneficial impact to the wilderness resource.

Beneficial impacts would occur from wilderness designation of the Park Range but they are not significant, since, even without designation, the area is not expected to lose its wilderness values in the long term. A significant adverse impact to the wilderness resource would occur by not preserving the wilderness character of the South Egan Range Wilderness Study Area.

Designation of portions of three wilderness study areas as wilderness would help balance the geographic distribution of areas in the National Wilderness Preservation System; would expand the diversity of ecosystems represented in the Wilderness System; and would expand opportunities for primitive recreation and solitude in designated wilderness areas available to three Standard Metropolitan Statistical Areas.

The Egan Resource Area Wilderness Technical Report contains a detailed analysis of the impacts associated with this alternative as they relate to wilderness.

MINERALS AND ENERGY

1) Mineral development would be adversely and significantly impacted because of wilderness designation.

The suitable portions of the Goshute Canyon and Riordan's Well Wilderness Study Areas contain 11,500 acres with moderate mineral potential. This is a significant adverse impact to mineral development.

There are no conflicts with oil and gas potential. Some geothermal potential would be included in the Park Range Wilderness Study Area. This would be a significant adverse impact, but is mitigated by the remoteness of the unit.

There are no conflicts in the South Egan Range since none of the area is recommended suitable.

SOCIAL ANALYSIS

As is true of the adjacent Schell Resource Area, initially authorizing livestock use in the Egan Resource Area at the 3-year average licensed use which would have the effect of significantly lowering active perference levels, would not negatively impact most ranchers since they are now grazing at their preferred levels. Some ranchers perceive that this alternative is unfair to the few operators who had temporarily reduced herd size or who now need to increase the scale of their operations to attain a profit. It could be expected that there could be a significant political response to any attempt by the BLM to reduce grazing levels without adequate data to support those decisions.

The implementation of this alternative would not cause any significant changes in:
(a) ranching sectors jobs or occupational outlook; in relationships between the Bureau and the ranching community; or in ranching community lifestyles. However, since the range improvement projects that would have the highest priority and subsequently be implemented under this alternative are those which have the highest benefit/cost ratio some operators may gain significantly while others may see no direct effect.

This would be frustrating for the latter operators who, given the economic problems facing the ranching industry in Nevada, hope and expect the BLM to do more land treatments, fencing and water development. For those operators not benefiting from this element of the preferred alternative, it may be considered a significant adverse impact in both the short and long term to their ranching operations.

Anticipated short term reductions in licensed use would meet with substantial opposition among local ranchers who question the quality of monitoring data and the ability to establish an assessment of range trends over a short period of time. However, in the long term, the subsequent implementation of range improvement programs allowing increased livestock grazing would result in significant beneficial long term impacts for most ranchers.

Concern was expressed during the public comment period on alternative development that wild horses are rapidly increasing in numbers and are, in some areas, drifting outside of recognized wild horse herd use areas. Many of the ranchers have suggested that wild horse numbers should be reduced to and maintained at 1971 numbers to prevent what they perceive to be undue destruction of public range lands.

The reintroduction of big game species would probably be supported by the ranching sector as long as those reintroductions do not compete with livestock for existing forage. Reintroduction of big game species would, in the long term, probably increase hunter days, but not significantly so. However, since the main thrust of the reintroduction will be bighorn sheep, that would be considered a significant beneficial impact as far as reestablishment of that big game species is concerned. Perceptually, this would undoubtedly be considered a significant beneficial impact by those big game hunters who are trophy oriented.

The alternative would have significant long-term beneficial impacts for the utility sector since utility and transportation corridors would be designated and others would be planned. This should simplify the planning process, perhaps significantly so, for those agencies, firms and/or individuals involved with the planning for and subsequent construction of utility or transportation corridors.

In terms of visual impacts, this alternative would eliminate the possibility of future utility or transportation corridors being established on a case-by-case basis which projects are introduced, along with the effective utilization of fire management, plant communities would benefit, which will increase available forage beyond existing levels.

The increase in forage availability for livestock, in the long term, will have an insignificant beneficial impact. Gross sales may be expected to increase by $267,363, with an increase in net ranch income of $128,929. Employment in the livestock industry will increase by 3.9 jobs (3,800 hours). Total employment is expected to increase by 6.5 jobs. Refer to Table 4-2 for details.

Ranch wealth deriving from public land use will initially decline from $10.8 million to $6.2 million (based on licensing limited to 3-year average licensed use), and recover to approximately $6.8 million with the additional AUMs provided in the long term. This estimated loss of $4.0 million in loan and sale values will be sustained until such time as the licensing up to preference levels can be permitted. This will have an adverse effect upon some ranchers' ability to obtain short-term operating capital.

In summary, ranch operating conditions and trends will continue as at present, with positive improvements and moderately beneficial economic effects accruing in the long term. Ranch net wealth will initially decline, but will recover somewhat over the long term.

FORESTRY

1. The forestry acreage base for determining available timber resources would be significantly reduced from Alternative A.

Under this alternative 342,441 acres would be available to the forestry program.

The impacts will be the same as in Alternative B, but the causes will be slightly different. Range improvements and land transfers will have a greater effect in reducing the acreage available to the forestry program. Wilderness study areas will not adversely impact the forestry program as much. A limited suppression fire management policy will be implemented which will result in a small increase in areas burned. Except for catastrophic fires, this impact will be minimal.

EGAN RESOURCE MANAGEMENT PLAN

Table 4-2

Economic Impacts to Livestock Grazing

Preferred Alternative

Long-Term

ZONE	AUMs (+/-)	Increase in Gross Sales ($)	Increase in Net Income ($)	Increase in Livestock Industry Employment (fte)[1]	Increase in Area Economy Income ($)	Increase in Area Economy Employment (fte)
1. Buck and Bald/Diamonds	+ 1,789	+ 42,775	+ 20,627	+ 0.6	+ 39,424	+ 1.0
2. Duckwater/Buttes	+ 4,269	+102,072	+ 49,222	+ 1.5	+ 94,078	+ 2.5
3. Steptoe/Horse and Cattle Camp	+ 2,471	+ 59,082	+ 28,491	+ 0.9	+ 54,459	+ 1.5
4. Jakes Valley	+ 72	+ 1,722	+ 830	0	+ 1,586	0
5. West Lund Flats	+ 2,581	+ 61,712	+ 29,759	+ 0.9	+ 56,878	+ 1.5
Resource Area Total	+11,182	+267,363	+128,929	+ 3.9	+246,425	+ 6.5

[1] FTE: Full-Time Equivalent (2,000 hours).

ALTERNATIVE A

VEGETATION

1. The successional stages of the various plant communities would move away from the desired levels of management.

In the short term, there will be an insignificant adverse impact upon vegetation in zones 1 and 2. In zones 3, 4, and 5 there will be no change in vegetation over the next five years. In the long term, the vegetation in zone 3 will experience an insignificant adverse impact. In zones 1, 2, 4, and 5 over the long term, however, there will be a significant adverse impact upon vegetation.

The impact on vegetation in zones 1, 2, 4, and 5 over the long term would be significantly adverse as a result of the continuation of existing livestock management practices. No action would be taken to reduce the competition for available forage between livestock, wild horses and wildlife in these zones. Range improvement projects would only be implemented to solve site-specific problems, as necessary, to maintain existing management practices. Existing management actions that can be attributed to bring about these adverse impacts include the current heavy utilization of the vegetation by livestock, wild horses and wildlife, historical periods of use, and the lack of allotment management plans.

The adverse impacts on vegetation from heavy stocking rates would result in deterioration of vigor and production of key management species, which would result in reduced plant vigor and/or total loss of certain species from individual vegetation communities. Cook (1967) indicated in relation to effect of intensity of harvesting, without exception, the more of the herbage that is removed, the more plants died and the smaller were the remaining plants.

Based on the above discussion it is anticipated that the continued heavy utilization of the vegetation resource would cause further degradation of the plant species, thus, heavy grazing intensity (overuse) would contribute to the significant adverse impact on vegetation communities in all zones.

This deterioration would also be caused by the existing periods-of-use which allow early livestock turnouts (March and April) in most allotments. In addition, the majority of livestock permittees in the resource area are licensed for various periods of winter use, thus resulting in year-long livestock grazing. The following cited references are indicative of how the existing periods-of-use in the resource area would adversely impact the vigor of key management species. Trlica et al. (1971) indicated that depletion of carbohydrate reserves is believed to be a primary factor for loss in plant vigor and subsequent range deterioration. Pearson (1964) indicated, "In the grasses this critical period begins with the boot stage and closes with complete maturation of the fruit." Also, Pearson (1964) suggested as root reserves are depleted, thus plants become highly susceptible to injury. The present periods-of-use would result in further losses of root reserves which would cause a continued decline in vigor. Declining vigor would result in further degradation of vegetation communities.

Based on the above cited references and discussion, the existing periods-of-use would contribute to the overall significant adverse impact on vegetation communities in the resource area.

The allotments would stay as they currently are without allotment management plans and associated grazing systems. These allotments currently exhibit distribution and overuse problems and have early spring turnouts of livestock which typifies heavy continuous livestock use. Kothmann, et. al. (1969) indicated from vegetation records kept on his study that heavy continuous grazing has resulted in a deterioration of the vigor and species composition of the vegetation resource.

LIVESTOCK GRAZING

1. Present licensed use would not change.

This alternative proposes that livestock use in all management zones would continue at the three year average licensed use. In the long term, however, vegetation in management zones 1, 2, 4, and 5 would significantly move away from the desired level of management, thereby reducing the amount of available forage for livestock. This loss of forage would have a significant adverse impact upon livestock in the long term. Unplanned and unscheduled range improvement projects would only be implemented to resolve site-specific problems, as necessary, to maintain existing management practices and would not be equivalent to implementing an allotment management plan or any intensive management system.

No action would be taken to reduce the competition for available forage among livestock, wild horses and wildlife. Current utilization levels and seasons of use would continue throughout the resource area. The effect of continued competition for forage among livestock, wild horses and wildlife would be to reduce the amount of forage available to livestock, wild horses and wildlife.

2. Livestock management problems would occur as a result of land disposals.

Without the implementation of a resource management plan, land disposals would be done on a case-by-case basis. If public land currently grazed under license were acquired, through BLM disposal, by someone other than the licensee, a significant adverse impact to that livestock operation could result. These impacts could be both short or long term. The negative impacts are expected to be of lesser magnitude under this alternative than the others because fewer disposals would take place.

3. No added costs to livestock operators would occur because of wilderness designations.

Since no suitable wilderness recommendations would occur under this alternative there would be no added costs to livestock operators.

WILDLIFE

1. Numbers of big game would decrease.

Numbers of big game within all zones will remain static within the short term, except for zone 1 where big game numbers will insignificantly decrease. This will be caused by over-utilization of the forage resource. In the long term, big game numbers will experience significant adverse impacts to their numbers in all zones but zone 3. The decrease in big game can be attributed to over-utilization of forage. This is due, in part, to the competition between livestock, wild horses and wildlife. No management actions would be implemented to eliminate the problems associated with the heavy utilization of vegetation and historic periods of use. Within zone 3, big game numbers will decrease insignificantly.

2. Big game herd distribution would remain the same.

Big game herd distribution will remain the same within all zones except for zones 2 and 3. In zone 2, antelope will continue to increase their home ranges south in Ruby Valley, because of the acceptable forage base found by the antelope. In zone 3, elk will continue to pioneer into new use areas as elk have over the past several years.

3. Distribution of small game species would decrease.

a. Zone 1 - In the short term there will be insignificant adverse impacts to small game species within this zone. Small game species are generally tied to both stream and other riparian area vegetation types. As stream riparian moves one condition class toward the undesired, over the long term, small game distribution will be significantly impacted.

b. Zone 2 - In the short term there will be insignificant adverse impacts to small game species within this zone. Small game species are generally tied to both stream and other riparian area vegetation types. As stream riparian moves one condition class toward the undesired, stage over the long term, small game distribution will be significantly impacted.

c. Zone 3 - In both the short and long term there will be insignificant adverse impacts to the distribution of small game species. Over-utilization of both stream and other riparian vegetation types will continue and small game distribution will decrease insignificantly.

d. Zone 4 - In both the short and long term there will be insignificant adverse impacts to the distribution of small game species. Over-utilization of riparian vegetation types will continue and small game species distribution will be insignificantly impacted.

e. Zone 5 - In both the short and long term there will be insignificant adverse impacts to the distribution and density of small game species. Over-utilization of both stream and other riparian vegetation types will continue and small game distribution will decrease insignificantly.

4. Distribution of upland game species would decrease.

Upland game species are tied to riparian vegetation types during the generally hot summer months for water, cover, and forage for their brooding clutches.

In the short term, upland game species distribution will be insignificantly adversely impacted. In the long term, stream riparian vegetation will change one condition class toward the undesired from continued over-utilization and upland game species distribution will be significantly adversely impacted.

5. Distribution of nesting raptors would remain static or decrease.

Nesting raptor distribution will remain static in the short term. As deciduous riparian vegetation types continue to be over utilized and understory vegetation in aspen vegetation types is eliminated, an insignificant decrease in nesting buteos, owls, and acclpters will occur in the long term.

6. Stream riparian habitat would decrease in condition class.

Stream riparian vegetation will decrease from the present condition class that now exists over the short term. In the long term stream riparian vegetation will drop one condition class lower. This will cause a reduction in fish populations.

7. Reintroduction of native wildlife species would be supported.

No native wildlife species introductions will be supported under this alternative.

WILD HORSES

1. Wild horse numbers would decline.

There will be no significant impacts on wild horse numbers in the short term. In the long term there will be significant adverse impacts in all zones except zone 3. As a result of the competition for available forage between livestock, wild horses and wildlife and the lack of allotment management plans, necessary for implementatin of grazing systems, there will be a significant adverse impact upon vegetation in zones 1, 2, 4, and 5. This reduction, over the long term, in available forage will cause a significant adverse impact upon wild horses.

The Monte Cristo Herd Management Area will be managed at 96 horses from the existing 365 horses.

2. Herd viability would be decreased.

There will be no significant impacts in all zones except 4 and 5, where there will be significant adverse impacts. Horses will be maintained at a level which herd viability is difficult to maintain, thus the potential exists that the herd will be lost.

3. The free-roaming nature of wild horses would be preserved.

There will not be a significant impact to the free movement of wild horses in any zone. No actions will be taken that will interrupt or change the migration or other movement of the majority of wild horses.

4. Areas where wild horses existed in 1971 would be preserved.

There will be no significant impact in any zone. All wild horse areas which were inhabited by wild horses in 1971 will continue to be managed as wild horse areas.

5. Death loss during capture operations would not exceed two percent.

There will be no significant death loss impact in any zone during wild horse gathering operations. Historically death loss during gathering operations has been less than two percent in the Ely District. During gathering operations it is anticipated that some horses will be destroyed for reasons other than the gathering operation itself. These reasons would include disease, age, and pre-existing injuries. Few wild horses are actually injured during gathering operations.

6. Existing wild horse characteristics or traits would not be eliminated.

There will be no significant impact on wild horse characteristics or traits in the Egan Resource Area. The random removal of wild horses will insure that no wild horses with specific characteristics or traits are pre-selected for removal.

REALTY MANAGEMENT

1. Community expansion and agricultural development would be hindered.

No disposal of Federal land would take place under this alternative. The small rural communities of White Pine County are surrounded by federal land and private land available for development is relatively limited. Any substantial increase in the size of the communities or the amount of agricultural land is dependant upon the availability of federal land. In the short term community expansion and agricultural development would not be affected because undeveloped private land exists to meet the expected needs.

In the long-term there would be no significant effect on community expansion and agricultural development in zones 1 and 4, because no communities exist and none are expected, nor is there any significant potential for agricultural development. In zones 2 and 5 there is anticipated to be some agricultural development because of the suitability of some of the public lands for irrigated agriculture and water availability. However, most of this agricultural development would not be possible if no federal lands are made available. There would thus be a significant effect on agricultural development in zones 2 and 5 over the long term. Over the short term there would be no significant effect on community expansion in zones 2 and 5 because sufficient private land exists adjacent to the small communities to meet nearly all community expansion needs. However, over the long term there could be a significant negative impact if needs occurred for federal land and they could not be accommodated on existing private land.

In zone 3, there is anticipated to be some community expansion over the long term which will need federal lands to meet some of the growth. The relatively limited amount of undeveloped private lands and the high value of these lands would hinder expansion and development if additional lands, namely adjacent federal lands, are not made available to accommodate orderly growth and development. There would be a significant effect on community expansion if no federal land were available over the long term. The amount of land found suitable for agricultural development in the Steptoe Valley part of zone 3 is not anticipated to be significant because of the expected allowance of most if not all of the additional available ground water by the State Engineer for preferred uses associated with community expansion, industrial development, and planned agricultural development on existing private lands.

Thus, there would be no significant effect on agricultural development anticipated in the Steptoe Valley part of zone 3. However, some lands in the White River area of zone 3 are anticipated to be suitable for agricultural development. There would be a significant effect over the long term if these federal lands were not made available for development.

2. Utility and transportation companies would not benefit from long-range planning for major facilities.

Rights-of-way applications are presently processed on a case-by-case basis, with little thought given to long-range utility corridor planning. This method leads to a disorderly and unplanned pattern of rights-of-way on the landscape, more often than not, almost precisely in the location of the original application. Many times the granting of the right-of-way is slowed down, while potential impacts are mitigated. This is time-consuming and inefficient for both the BLM and the applicant. This lengthy application process and the uncertainty as to whether the right-of-way will be granted does not benefit utility and transportation companies and hinders development of accurate long-range plans.

WILDERNESS

1. No areas would be designated as wilderness. Wilderness values would be lost over the long term in three of the four Wilderness Study Areas.

Recommended Acreage

WSA	Suitable Acres	Nonsuitable Acres
Goshute Canyon	0	35,594
Park Range	0	47,268
Riordan's Well	0	57,002
South Egan Range	0	96,916
	0	236,780

A variety of impacts will likely occur to the wilderness study areas if they are not designated as wilderness. These will begin taking place soon after the areas are released from the Interim Management Policy protections. However, their impact to wilderness values within the entire wilderness study area will not be significant until the impacts have accumulated over the long term. The impacts which are likely to occur to the wilderness study areas (without designation) are discussed below:

Roads would be built or extended in association with mineral and energy exploration and development, off road vehicle use, recreation access, woodland product harvesting, access to private land, rangeland development, and standard fire suppression methods. Loss of vegetation and soil erosion would occur in conjunction with road development and increased off-road vehicle use for recreation and other purposes. Road extension and development would be particularly impacting in the Goshute Canyon and South Egan Range Wilderness Study Areas.

Additional impacts would accrue from mineral and energy exploration, assessment work, and development. In the short term about 2,000 acres would be impacted in the southern portion of Goshute Canyon Wilderness Study Area from mining operations. In the long term wilderness values on about 15,000 acres will be impacted by mining in Goshute Canyon, on about 10,000 acres in Riordan's Well, and on about 5,000 acres in the South Egan Range.

Woodland product harvesting (fuelwood, pine nuts and posts) would continue and increase within all the wilderness study Areas. Woodland harvest would impact wilderness values along the perimeters of all the areas but especially the South Egan Range and Goshute Canyon Wilderness Study Areas.

Impacts to the wilderness characteristics will occur in all the wilderness study areas as proposed range projects are implemented and new range projects are developed. These would include vegetation conversions, seedings, spring developments, fences and pipelines.

Although localized impacts will occur in the Park Range Wilderness Study Area, it is not expected to lose its wilderness characteristics over the long term.

Manageability

Since no wilderness study areas are recommended suitable, there are no manageability considerations in this alternative.

Conclusion

Wilderness characteristics will be lost in the long term to the point where Goshute Canyon, Riordan's Well Wilderness Study Areas and the South Egan Range units would no longer qualify as wilderness study areas.

This is a significant adverse impact to the wilder- ness resource in these three areas. In the short term, impacts would be insignificant although minor impacts of a localized nature would occur.

Diversity in the National Wilderness Preservation System would not be expanded since none of the wilderness study areas are recommended suitable.

The Egan Resource Area Wilderness Technical Report contains a detailed analysis of the impacts associated with this alternative as they relate to wilderness.

MINERALS AND ENERGY

1. Mineral development would not be impacted because of wilderness designation.

None of the four wilderness study areas would be recommended as suitable for wilderness designation.

SOCIAL ANALYSIS

Although some ranchers in the resource area have expressed support for the implementation of this alternative, the majority of the comments received from the ranching community during the alternative development public comment period were against the implementation of Alternative A. The consensual rationale of these individuals in opposing the implementation of this alternative was based on three factors. First, major concern was expressed that there would be no planned or scheduled range improvement projects except on a case-by-case basis. Second, concern was expressed that monitoring data would not be used to adjust grazing levels. Third, considerable concern was expressed that wild horses would be maintained at current levels.

The Resource Area ranching sector is anxious that the BLM use their management tools and revenue from grazing fees to develop the grazing potential of the area. The implementation of this alternative is viewed as thwarting that effort. It could be expected that the implementation of this alternative could have significant adverse impact on relations and cooperation between the ranching sector and the BLM in both the short and long term.

It could be expected that those individuals and stakeholder groups with a conservation orientation would admantly oppose the implementation of this alternative since implementation would, in their view, perpetuate the degradation of the public lands in both the short and long term. It is anticipated that the implementation of this alternative would have a significant adverse impact on relations and cooperation between these individuals and stakeholder groups and BLM.

It is anticipated that those individuals and stakeholder groups who have expressed the view that both wildlife habitat and riparian areas are in a downward trend would vigorously oppose the implementation of this alternative. In the absence of actions to improve wildlife habitat, riparian and wetland habitat, and the maintenance of present levels of wild horses and livestock, it is expected that relationships between the various stakeholder groups as well as between the stakeholder groups and the BLM would be strained.

Opposition could also be expected from the utilities sector since this alternative would neither plan for nor designate additional utility or transportation corridors but would process rights-of-way applications on a case-by-case basis. This could increase the costs of or impede the development of major power projects, such as the White Pine Power Project and make future energy development projects and transportation routes more difficult and expensive to plan. It could be expected that those utility companies with an interest in the resource area would vigorously oppose the implementation of this alternative. The implementation of this alternative could have a significant adverse impact on the utility sector in both the short and long term.

In terms of visual impacts, the implementation of this alternative has the potential of creating, in the long term, a multiplicity of adverse visual impacts for those who live in or transit the resource area. Depending on the number and location of these utility or transportation routes that would evolve over the long term, it could be a significant adverse visual impact.

This alternative in essence, would perpetuate the status quo. The maintenance of the status quo would probably find a broad base of support among those individuals and stakeholder groups who use the public land resources for their livelihood or in support of their recreational activities.

The implementation of this alternative would probably be favorably received by those area residents who withheld support for the wilderness program because of their concern about potential mineral deposits within the study areas.

Over a prolonged period of time, wilderness characteristics and values may be irretriveably lost in one or more of the four areas as a direct consequence of those areas not being afforded the protection mandated for those areas which are included in the National Wilderness Preservation System. This would undoubtedly be considered a significant adverse impact by those who endorse wilderness designation. It could be expected that those individuals and stakeholder groups who are conservationally oriented would, at the local, regional and national levels, adamantly oppose the implementation of the No Wilderness Alternative. The Nevada Division of State Parks could also be expected to oppose the implementation of this alternative since they supported the designation of both Goshute Canyon and South Egan Range as wilderness areas. Since the 1982 Statewide Comprehensive Outdoor Recreation Plan addresses wilderness in the first two high priority issues, the dropping of these two areas may be considered a significant adverse impact in statewide efforts to preserve "wildlife habitat, public lands for outdoor recreation, historic structures and sites, unique natural and unusual areas, and wilderness."

Local Community

There appears to be little dissatisfaction with current community conditions although there is some community support for ranching sector dissatisfaction with some aspects of BLM's rangeland management policies. However, this support follows traditional community response patterns and it is not expected that new community coalitions would form as a result of implementing this alternative. No significant impacts to the community would be anticipated in either the short term or the long term if this alternative were implemented.

Regional and National

It could be expected that those individuals and stakeholder groups respresenting wild horse, wilderness, outdoor recreation, wildlife and conservation oriented groups would oppose implementation of this alternative. This would contribute toward and increased animosity toward and dissatisfaction with BLM management policies, an adverse though non-quantifiable impact.

ECONOMIC ANALYSIS

No information is available for the quantification of economic effects, either beneficial or adverse, or the estimation of their significance, from proposed resource uses under this alternative. A general discussion, postulating apparent effects, follows:

Wilderness

No significant economic effects will result from non-designation of wilderness. No significantly beneficial economic advantages would be lost and no major adverse impacts avoided. However, wilderness recreation opportunities and their potential income effects would be foregone, along with the benefits of preservation for future generations. In turn, mineral development potential will remain unfettered and present recreation uses and trends, particularly off-road vehicle use, will be continued.

Realty management

Expressions of interest and applications for transfer of public lands to other ownership would continue to be considered on a case-by-case basis. But, without the encouragement of the specific management proposals provided under the other alternatives, it is expected that the present pattern of land ownership within the resource area would remain substantially the same. The potential for economic development, or the possibility of realizing benefits that might derive from more efficient use of the land, will be diminished.

Livestock grazing

No assessment of the economic effects can be accomplished without information regarding the projected availability and allocation of forage.

This alternative would introduce no changes in the administration of grazing on public lands, so that livestock grazing would continue at its present level. Although this would have no immediate impact on area ranchers, the present downward trend in ecological range condition is likely to be accelerated by continued overgrazing of the vegetation resource. It is expected that the continuation of current grazing levels would result in a decline in available vegetation over the long term.

With no data available to evaluate potential effects on future forage levels, economic impacts cannot be estimated. However, further degradation of the range brought about by continuation of current grazing levels, without range improvement projects, would result in decreased calf crops, lower weaning weights, and reduced calf weight at sale. These reductions would in turn lower gross ranch livestock sales and revenues. These impacts have the potential for significantly adverse effects on area ranchers, over the long term.

Impacts resulting from slowly declining available vegetation would occur over an extended period of time. Adjustment to these changing conditions by area ranchers, perhaps taking the form of improved technologies or other production function relationships, could mitigate some of this adversity.

Wildlife-associated recreation

This alternative would also have an adverse impact on wildlife and recreation, since declining habitat quality would result in a reduction of wildlife population below existing numbers. Impacts, while not quantifiable, are expected to result in fewer hunter-days and a reduction in hunting or wildlife-associated recreation expenditures. The effect on area income and employment which derives from these expenditures, while adverse, is not expected to be significant.

FORESTRY

1. The forestry acreage base for determining available timber resources would not be affected.

Under this alternative 409,616 acres would be available to the forestry program. It is expected that the demand for forestry products will continue to increase especially for fuelwood and christmas trees. It is anticipated that harvest pressures on the more accessable areas will approach the point that some stands will be cut above allowable cutting limits.

Under this alternative the forestry program will not be significantly adversely impacted by wilderness designation, land transfers, range management projects, and the fire management program.

VEGETATION

1. The successional stages of the various plant communities would move toward the desired levels of management.

Initially, livestock would be licensed at 92,308 AUMs. Allotment management plans and range improvement projects associated with those plans would be implemented. One of the main objectives of an allotment management plan is to increase available forage use while providing ground cover, species composition, plant vigor and density. The physiological needs of plant species would be met by implementing proper grazing management plans and range improvement projects. Effective grazing systems would allow plant species the opportunity to flower and build up carbohydrate reserves before being weakened by grazing (Blaisdell and Pechanec, 1949; Britton, et. al., 1979). Grazing systems would meet the physiological requirements of management species by providing the rest and uninhibited growth required to increase growth, vigor and seedling establishment.

Range improvement projects such as fences or water developments would improve the distribution of livestock. Uniform utilization of the range in conjunction with rest during critical periods of growth would further reduce the effects on plants resulting from year-long grazing and, in some instances, over-utilization. Vegetation conversions would provide additional vegetation for grazing during the critical spring growth period. Reducing utilization levels on the native vegetation during the spring growing season would allow the vegetation to improve while, at the same time, increase the total amount of forage available for grazing.

In all zones there will be an insignificant beneficial impact upon vegetation in the short term; i.e., vegetation will begin to move toward the desired level of management within the next five years. See Appendix 14 for anticipated successional stage by vegetation type derived through management.

In all zones there will be a significant beneficial impact upon vegetation in the long term. This movement toward the desired level of management can be attributed to vegetation conversion projects which will greater increase the available forage, decreasing pressure on the existing forage. It can also be attributed to the change in the fire management program, which will increase the opportunities to inhibit the growth of vegetation, which is reducing available forage in many areas.

LIVESTOCK GRAZING

1. Present licensed use would decrease.

This alternative proposes that livestock use in all management zones would decrease from the three year average licensed use, 123,461 AUMs to 92,308 AUMs. The forage gained through the reduction in livestock numbers would be made available to wildlife to help achieve reasonable numbers. This would amount to 75 percent of the current three year average licensed use and 42 percent of preference. Proposed levels of use are as follows: management zone 1 is 12,426 AUMs (45 percent of the three year average licensed use and 22 percent of preference); management zone 2 is 40,629 AUMs (93 percent of the three year average licensed use and 52 percent of preference); management zone 3 is 25,343 AUMs (69 percent of the three year average licensed use and 44 percent of preference); management zone 4 is 1,956 AUMs

(69 percent of the three year average licensed use and 26 percent of preference); and management zone 5 is 11,954 AUMs (96 percent of the 3-year average licensed use and 78 percent of preference). The proposed levels of use would be a short-term significant adverse impact to livestock grazing in all management zones in the resource area.

In the long term, however, vegetation would move toward a desired level of management due to the implementation of various management actions, including livestock management and range improvement projects. Water developments required in the implementation of grazing systems and allotment management plans would make additional AUMs available to livestock, since it would result in more even livestock distribution. 9,000 acres of vegetation conversion, primarily crested wheatgrass seedings, would provide additional forage as a direct result of the seeded grasses.

In addition to the construction of various range improvement projects, grazing systems, an integral part of any allotment management plan, would be implemented. Grazing systems may require greater stocking rates on smaller portions of the allotment. This increased utilization in the grazed area allows the ungrazed areas to rest while providing more even utilization of the vegetation in the grazed areas. The plants in the ungrazed areas are allowed to increase vigor, storage and reproduction which leads to increased production the following year. These positive aspects of rest outweigh the increased utilization in the grazed years (Shiflet and Heady, 1971; Hickey, 1971). Based on a review of grazing systems in the western states by Van Poolen and Lacey (1979) and the professional judgement of the resource area staff, it is estimated that a ten percent increase in AUMs would be realized through implementation of grazing systems and allotment management plans.

Range improvement projects which benefit livestock would account for nearly 6,086 AUMs increase, which would result in the projected long-term livestock use levels up to 98,394 AUMs.

A ten percent increase in AUMs resulting from the implementation of grazing systems, over the long term, would amount to an additional 9,230 AUMs. A portion of this increase would be available to livestock and this would result in a significant beneficial impact to livestock operators.

2. Livestock management problems would occur as a result of land disposals.

This alternative proposes the eventual disposal of public land in 20 grazing allotments totaling some 39,555 acres. This would affect 31 livestock operators. If these lands are acquired by someone other than the livestock operator in the affected allotment, a significant adverse impact to that livestock operator could result. These impacts would be both short and long term and are expected to be of a lesser magnitude under this alternative than under alternatives C and D, but of a greater magnitude than those under alternative A.

3. Added costs to livestock operators would occur because of wilderness designation.

With wilderness designation, all access routes determined to be roads and noticeable ways, which were cherry stemmed during BLM's wilderness inventory, would remain open to all vehicle traffic. All existing range improvements have access to them.

New range developments will only be permitted when they will better protect the rangeland or the wilderness resource. Costs of new developments will be higher in wilderness areas than outside because of the emphasis placed on use of the least impairing construction methods and most environmentally compatible materials. Cost increases will be within reason. Only one range project, a well, is proposed in the wilderness study areas in this alternative. It would be disallowed.

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WILDLIFE

1. Numbers of big game would increase.

In the short term, big game numbers will increase slightly. This is an insignificant beneficial impact. The slight increase in numbers will be due primarily to an increase in vegetation. The increase in vegetation will result from better livestock distribution through the implementation of grazing systems and the construction of range improvement projects. Several projects will be constructed to benefit wildlife and these will provide an additional 6,442 AUMs of forage.

In the long term, big game numbers will increase significantly due to an increase in vegetation and the construction of range improvement projects. It is estimated that a ten percent increase in AUMs, approximately 9,230 AUMs, would be realized through the implementation of grazing systems (Van Poolen and Lacey, 1979). A portion of these AUMs would be available to wildlife. This, plus the additional 6,442 AUMs resulting from range improvements, would result in a significant beneficial impact to livestock over the long term.

2. Big game herd distribution would increase.

Big game herd distribution will increase insignificantly. As big game numbers increase in a response to more available forage created by a 19% reduction in livestock use area wide in the long-term, an insignificant beneficial impact to big game distribution will occur.

3. Distribution of small game species would increase.

Small game species distribution will increase insignificantly over the short term. With a 19% reduction in livestock use area wide, riparian areas will receive less use. Small game species are generally tied to riparian areas, stream riparian will move one condition class toward the desired, other riparian vegetation types (see appendix 14) will move one successional stage toward the desired stage over the long term and small game species distribution will significantly increase their distribution.

4. Distribution of upland game species would increase.

Upland game species distribution will increase insignificantly. Over the long term, with a 19% reduction in livestock resource area wide, vegetation types will receive less use, meaning more forbs and grasses available for all age classes of upland game species.

5. Distribution of nesting raptors would increase.

Nesting raptor species will increase over the short term. Over the long term, with a 19% reduction in livestock use area wide, all vegetation types (see appendix 14) will move one successional stage toward the desired and less use will be imposed on native grasses and forbs which are essential for raptor prey species maintenance. There will be more invertebrates, e.g., grasshoppers, beetles, available for raptor species that require insects for their fledglings (Kestrels and swainson hawks). In the long term, more raptor prey species will be available. Deciduous tree understory will receive less use with the proposed rest rotation grazing systems in allotments with riparian vegetation types, more deciduous trees will reach maturity and more nesting territories for owls, buteos, and accipters will become available. There will be significant beneficial impacts to nesting raptor distribution.

6. Stream riparian habitat would remain the same.

Stream riparian habitat will remain the same in the short term. In the long term, with a 19% reduction in livestock use area wide and proposed rest rotation grazing systems in allotments with the stream riparian, the grazing systems may stop the downward trend of the riparian, and the riparian habitat.

7. Reintroduction of native wildlife species would be supported.

Reintroductions of native wildlife species into historic use areas will be encouraged and supported because of the available forage made available by reducing livestock use 19% area wide. Reintroductions of antelope into Newark, Long, Butte and White River Valleys could take place and antelope distribution would increase significantly. Bighorn sheep could be introduced to the South Pancake Mountains and possibly the Park Mountain range and increase bighorn sheep distribution significantly.

WILD HORSES

1. Wild horse numbers would increase.

In the short term, wild horses will increase slightly. This is an insignificant beneficial impact. The slight increase in numbers will be due primarily to an increase in vegetation. The increase in vegetation will result from better livestock distribution through the implementation of grazing systems and the construction of range improvement projects.

In the long term, wild horse numbers will increase significantly due to an increase in vegetation and the implementation of grazing systems. It is estimated that a ten percent increase in AUMs, approximately 9,230 AUMs, would be realized through the implementation of grazing systems (Van Poolen and Lacey, 1979). A portion of these AUMs would be available to wild horses. This would result in a significant beneficial impact to wild horses over the long term.

2. Herd viability would be enhanced.

There will be no significant impacts in any zones with horses except zones 4 and 5, where there will be a significant beneficial impact. Herd viability will be increased by relocating wild horses from other zones to supplement the existing 20 horse herd. A minimum of 30 horses will be relocated into zones 4 and 5.

3. The free-roaming nature of wild horses would be preserved.

There will not be a significant impact to the free movement of wild horses in any zone. No actions will be taken that will interrupt or change the migration or other movement of the majority of wild horses.

4. Areas where wild horses existed in 1971 would be preserved.

There will be no significant impact in any zone. All wild horse areas which were inhabited by wild horses in 1971 will continue to be managed as wild horse areas.

5. Death loss during capture operations would not exceed two percent.

There will be no significant death loss impact in any zone during wild horse gathering operations. Historically death loss during gathering operations has been less than two percent in the Ely district. During gathering operations it is anticipated that some horses will be destroyed for reasons other than the gathering operation itself. These reasons would include disease, age, and pre-existing injuries. Few wild horses are actually injured during gathering operations.

6. Existing wild horse characteristics or traits would not be eliminated.

There will be no significant impact on wild horse characteristics or traits in the Egan Resource Area. The random removal of wild horses will insure that no wild horses with specific characteristics or traits are preselected for removal.

REALTY MANAGEMENT

1. Some Community expansion and agricultural development needs would be accommodated.

The disposal of up to 39,555 acres over the long term (20 years) would result in a transfer of up to 2,000 acres per year to meet demands for land for a variety of purposes. Refer to Table 4-1, Alternative B, for estimated acreages by land use classification: residential, commercial, etc. Refer to the Lands and Wilderness (Alternative B) Map at the end of Chapter 2 for the lands identified for potential transfer. It should be noted that, because of the small scale, these maps are for general location only and should not be considered completely accurate.

The small rural communities of White Pine County are surrounded by Federal land and private land available for development is relatively limited. Any substantial increase in the size of the communities or the amount of agricultural land is dependent upon the availability of federal land. In the short term, community expansion and agricultural development would not be affected. Over the long term there would be no significant effect on community expansion and agricultural development in zones 1 and 4. This is because no communities exist and the potential for additional irrigated agricultural development is insignificant. Over the long term some but not most of the public desired agricultural development in zones 2 and 5 can be accommodated (BLM, U.S.D.I. study). Even so there is anticipated to be a significant beneficial impact to the local economy.

Over the short term there would be no significant effect on community expansion in zones 2 and 5 because sufficient private land exist adjacent to the small communities to meet nearly all community expansion needs. Should any federal land be needed in zones 2 and 5 for community expansion it would be mostly accommodated resulting in a slightly beneficial impact.

In zone 3, there is anticipated to be some community expansion over the long term which would need federal lands to meet some of the growth. It is expected that there will be a beneficial effect as federal land would be accommodated.

Over the long term the amount of land suitable for agricultural development in the Steptoe Valley part of zone 3 is not anticipated to be significant because of the expected allowance of most if not all the surplus ground water by the State Engineer for preferred non-agricultural uses associated with community expansion, industry, and planned agricultural development on existing private land. The effect of allowing only small amounts of federal land in Steptoe Valley for agricultural development is expected to be only slightly beneficial.

However, there are some federal lands expected to be developed for irrigated agriculture in the White River Valley area of zone 3. Some of these federal lands would be made available for such use in this area of zone 3. Over the long term disposal of some federal land for agricultural development would have a significant beneficial effect on agricultural development in this area of zone 3.

There would be a slight increase in the need for utilities, roads, and services. Recreational and public purpose needs would be accommodated in any zone.

2. Utility and transportation companies would not benefit from long-range planning for major linear facilities.

Rights-of-way applications are presently processed on a case-by-case basis, with little thought given to long-range utility corridor planning. This method leads to a disorderly and unplanned pattern of rights-of-way on the landscape, more often than not, almost precisely in the location of the original application. Many times the granting of the right-of-way is slowed down, while potential impacts are mitigated. This is time-consuming and inefficient for both the BLM and the applicant. This lengthy application process and the uncertainty as to whether the right-of-way will be granted does not benefit utility and transportation companies and hinders development of accurate long-range plans.

Establishing only one east-west and one north-south corridors with limited capacity for additional rights-of-way, does not accommodate the proposed projects or any future linear right-of-way projects. Thus, there would be a significant adverse effect on the plans of the utility industry in the short- and long-term.

WILDERNESS

1. The four Wilderness Study Areas would be designated as wilderness. Wilderness values would be preserved over the long term on all but the unmanageable acres.

Recommended Acreage

WSA	Suitable Acres	Nonsuitable Acres
Goshute Canyon	35,594	0
Park Range	47,268	0
Riordan's Well	57,002	0
South Egan Range	96,916	0
	236,780	0

Refer to the Lands and Wilderness (Alternative B) Map at the end of Chapter 2 for recommended wilderness areas in this alternative. It should be noted that, because of the small scale, these maps are for general location only and should not be considered completely accurate.

In this alternative the wilderness resource would receive maximum protection, and this would help ensure the integrity of the wilderness resource. This alternative would include 5,009 acres of the Goshute Canyon Instant Study Area. This alternative would not, however, prevent some adverse impacts due to manageability problems. The beneficial impacts to wilderness would be as discussed under the Preferred Alternative, but on 236,780 acres. In addition, designation of the South Egan Range would improve the opportunities for primitive recreation within five hours drive of Las Vegas.

Manageability

The wilderness study areas could be managed to preserve their wilderness character in the long term. However, portions of the areas would be unmanageable as wilderness. In the long term mining activities associated with valid discoveries would likely impact approximately 4,000 acres in the southern end of Goshute Canyon Wilderness Study Area; 1,000 acres in the northern part of the South Egan Range Wilderness Study Area; and 500 acres in the western tip of Riordan's Well Wilderness Study Area. The South Egan Range Wilderness Study Area has one private inholding with no access. Since access is guaranteed, a road could be built through the wilderness study area. Portions of the perimeters of Goshute Canyon Wilderness Study Area, South Egan Range Wilderness Study Area, and Riordan's Well Wilderness Study Area would be difficult to manage to control off-road vehicle use, road extension and forest product removal.

Conclusion

Preserving the wilderness characteristics of the Goshute Canyon Wilderness Study Area, South Egan Range Wilderness Study Area, and Riordan's Well Wilderness Study Area would be a significant beneficial impact to the wilderness resource. Beneficial impacts would occur from designation of the Park Range but these are not significant since it is not expected to lose its wilderness values in the long term, even without designation.

Designation of the four wilderness study areas as wilderness would help balance the geographic distribution of areas in the National Wilderness Preservation System; would expand the diversity of ecosystems represented in the Wilderness System; and would expand opportunities for primitive recreation and solitude in designated wilderness areas available to three Standard Metropolitan Statistical Areas.

The Egan Resource Area Wilderness Technical Report will contain a detailed analysis of the impacts associated with this alternative as they relate to wilderness.

MINERALS AND ENERGY

1. Mineral development would be adversely and significantly impacted because of wilderness designation.

a. Goshute Canyon Wilderness Study Area - A significant adverse impact would occur to mineral development due to withdrawal of high and moderate mineral potential from mineral entry. Most mining presently occurring on the periphery of the area would be unaffected unless it was desirable to follow a vein into the wilderness area.

b. Park Range Wilderness Study Area - Designation of this area as wilderness will have an insignificant adverse impact on mineral exploration and development. The potential is low for accumulation of mineral resources. Impacts to oil and gas exploration and development are insignificant adverse. Moderate geothermal potential would be included in the suitable areas along benches, and would become unavailable for development. This is not significant because of the areas remoteness.

c. Riordan's Well Wilderness Study Area - Full designation for the Riordan's Well Wilderness Study Area would be a insignificant adverse impact. This area has moderate mineral potential. Insignificant adverse impacts to energy exploration and development would occur within this area due to the low probability for occurance of oil and gas or geothermal resources.

d. South Egans Wilderness Study Area - insignificant adverse impacts would be realized from full wilderness designation of this wilderness study area. This area has high and moderate mineral potential.

Removal of the wilderness study area from energy exploration and development would also create insignificant adverse impacts.

SOCIAL ANALYSIS

The impacts under this alternative would be significantly adverse to ranchers both initially and after full implementation. Although the initial licensed use resource area wide is a nineteen percent (19%) reduction, those reductions range from approximately fifty-five percent (55%) in Management Zone 1 to a low of approximately four percent (4%) in Management Zone 5. In some cases, the magnitude of these reductions may exceed the critical threshold for maintaining a viable ranching operation. These AUM reductions would be particularly objectionable to the ranching sector since those reductions would be implemented in order to provide enough forage to help big game reach reasonable numbers. For those who would experience significant AUM reductions if this alternative were to be implemented, their material welfare would be severely impacted as a result of reduced property values, increased difficulty in obtaining loans and less income. The possibility exists that one or more of the ranchers would go out of business and be subjected to the stresses of changing lifestyles, occupations and places of residence.

The implementation of the AUM reduction proposals under this alternative would also generate further controversy, misunderstanding and conflict between the ranching sector and the BLM. The controversy would probably center around the quality of range data on which the BLM determined that AUM reductions were justified. Under these circumstances, the ranching community could be expected to mobilize and be highly committed to use their political and legal resources to protect their interests and avoid loses.

Those individuals and stakeholder groups who support increased numbers of big game would probably consider the implementation of this alternative as a beneficial impact on the big game population. Similar perceptions would probably also be held by those individuals and stakeholder groups who support the continued presence of wild horses at present levels on public lands, since this alternative generally maintains wild horse numbers at 1982-83 figures.

impacts related to the disposal of public lands would be similar to those in the preferred alternative but of lesser intensity.

The fact that 236,860 acres would be preserved as wilderness for the use of present as well as future generations. This could be considered a significant beneficial impact in the transmission of our cultural heritage.

This alternative would withdraw all four wilderness study areas from appropriation under the mining laws on the date of designation as wilderness unless otherwise provided for in the enacting legislation. The would perceptually be viewed as a significant adverse impact by the mining sector. The opportunities foregone for the individuals as well as for the community could be a significant adverse impact. This cannot be quantified since information on the exact location, size, and economic value of potential mineral and energy deposits within each wilderness study area has not been developed.

Designation of all four wilderness study areas as wilderness would not introduce new people into the area permanently in any significant numbers nor would designation cause residents to leave in any significant numbers. Although designation may increase jobs in the service sector, those jobs would be in the same sector and basically the same occupations as existing jobs. Designation would not provide significant employment opportunities to the underemployed or unemployed, nor would it create new jobs in different wage structures or create jobs for particular employee groups in any significant numbers.

Implementation of this alternative would place additional regulatory constraints on the use of motorized equipment, as well as placing constraints on other activities within wilderness areas. This may be viewed as an adverse impact by many area residents, particularly those who enjoy off-the-road vehicle recreational activities in remote, pristine areas.

Opposition to the implementation of this alternative could be expected from the livestock sector. Opposition would probably center around the issue of regulatory constraints and increased costs of future range improvements. In the long term, this may be perceived by some ranchers or companies holding grazing permits in the four wilderness study areas as a minimal adverse impact on their ranching operation. A few ranchers perceive wilderness as a beneficial impact because of the restraints placed on other activities.

For those individuals who view the federal presence in the resource area negatively, the implementation of this alternative would be seen as "tightening the federal grip on local lands" to the detriment of local residents. These individuals view the wilderness program as a program that either prohibits or places restrictive constraints on the historic and traditional multiple-use activities that have been allowed on public lands for as long as many of the area residents can remember. For these individuals, the implementation of this alternative would reinforce their negative perception of the Bureau of Land Management.

Local Community

The implementation of this alternative would probably result in decreases in the viability and stability of the local community to lifestyle changes, alterations of long-standing friendships, and interactional patterns and the possible emigration of some ranchers. These impacts would result in adverse, although nonquantifiable social impacts on the local community.

Regional and National

Opposition could be expected from those regional and national stakeholder groups who actively support the livestock industry. These groups would probably view the implementation of this alternative, in both the short and long term, as having a significant adverse impact on the livestock sector. It could be expected that other groups concerned with wildlife, recreation, wilderness and environmental protection would consider the implementation of this alternative as having beneficial impacts of varying degrees.

ECONOMIC ANALYSIS

Wilderness

No significant economic impact. Refer to discussion under Preferred Alternative.

Realty Management

This alternative calls for the disposal of 39,555 acres in the long term. Value of the lands identified for transfer are estimated at $13.2 million, with an estimated assessed valuation of $4.6 million (see appendix 13). Potential tax revenue increases are projected to be $107,613, with an offsetting reduction in county receipts of BLM payments in lieu of taxes of less than $3,000.

There could be adverse financial impacts on local governments if the tax revenues from the private land do not meet the expenses incurred in providing such services to outlying developments in any of the management zones over the long term.

Livestock Grazing

Impacts under this alternative would be significant and adverse to individuals, to the livestock industry, and to the area economy. In the short term, total AUMs in the resource area would be reduced by 31,153 or 19 percent from 3-year average licensed use, with a resulting loss in net ranch income totaling $359,194, approximately 13 percent of the resource area's estimated total net ranch income of $2,770,707. Employment in the livestock industry would decline by 11.6 percent (22.9 jobs), and ranch wealth, based on current active preference, would be reduced by $6.2 million.

The estimated decline in annual output, or gross sales, of $744,868 would have further significantly adverse effects upon the area economy as the multiplier effect of financial transactions takes hold. Overall, regional income would be reduced by $686,527 with 38.3 full-time equivalent jobs lost.

While the initial AUM reductions may be eased in the long term, due to proposed range improvement projects and the implementation of grazing systems, economic impacts will continue to be significant and adverse. The long-term effects will be derived from the continued loss of 25,327 AUMs which will result in a sustained annual decline of $605,569 in gross sales and $292,020 in net ranch income. It is estimated that the area economy would lose over fifteen jobs and $550,000 in lost annual income. Ranch wealth would decrease by $5.9 million from the current level.

In general, ranches in the area would be forced to make major adjustments in order to respond to the loss of AUMs and continue in business. These would involve reductions in herd size or expansion of base property forage sources. Many ranches are not in a position to adjust their operations in this manner, and may be forced to go out of business.

Zone 1. Buck and Bald/Diamonds.

This zone is most severely impacted. The proposed reduction of 15,312 AUMs, from 3-year average licensed use, represents a 55 percent loss of public land forage availability. This would result in an annual loss of $176,547 in net ranch incomes and 11.3 livestock industry jobs. It is likely that some of the operators in this zone could not survive. Rancher wealth would decline by $2.2 million in the short term. Long-term effects are only moderately less severe. Net ranch income lost will be $164,671 annually with the loss of 5.1 jobs. The loss in ranch wealth would be $1.5 million.

Zone 2. Duckwater/Buttes

AUM reductions of 2,900 amount to only 6.7 percent of 3-year average licensed use, but represent a reduction of 48 percent from preference level. Short-term effects result in a loss of net ranch income of $33,437 and 2.1 jobs in the livestock industry. Affected ranchers would need to be prepared to sustain themselves at more moderate operating levels in the short term. Ranch wealth is the most severely affected aspect of operations in this zone, being reduced by $1.9 million based on active preference. This loss in ranch wealth would have an important effect on borrowing capacity for operating capital.

In the long term, an increase in available forage, due to grazing systems and range improvement projects, will mean an increase in livestock use. Beneficial economic impacts will be insignificant.

Zone 3. Steptoe/Horse and Cattle Camp.

AUM reductions of 11,556 would result in an annual loss in gross sales of $276,304 and net ranch income of $133,241, resulting in an area-wide income reduction of $254,664 and an overall loss of 14.2 jobs. The reduction from average licensed use is estimated at 31.3 percent, with a loss in ranch wealth of $1.6 million.

Long-term increases in available forage will ease the short-term impacts only moderately. Reductions from current levels will mean a net annual decline of $124,939 in ranch income.

Zone 4. Jakes Valley.

Impacts in this zone are less severe, but involve fewer operators and may be of more individual significance. The reduction of only 866 AUMs nevertheless amounts to 30.7 percent of 3-year average licensed use. Income loss to the ranch operators is estimated at $9,985 with less than one full-time equivalent job lost.

Income loss will ease somewhat in the long term, with the net annual loss being $7,379 over current levels.

Zone 5. West Lund Flats.

The loss of 519 AUMs over the entire zone appears to be least significant and the easiest to sustain. Only 4.2 percent of the forage from average licensed use is lost, resulting in a direct income loss of less than $6,000 and only 0.4 jobs in the livestock industry. Ranch wealth is reduced $170,500 from preference level.

As in zone 2, the economic impacts in zone 5 will be beneficial but insignificant in the long term. The increase in available forage will be slight. Net ranch income will increase by about $600 annually over present income levels.

Tables 4-3 and 4-4 detail the short-term and long-term effects of actions proposed under this alternative.

FORESTRY

1. The forestry acreage base for determining available timber resources would be significantly reduced from Alternative A.

Under this alternative 341,696 acres would be available to the forestry program. wilderness study areas will contain a large amount of the manageable forest lands. The short-term effect will be minimal as demand can be met by using other areas. In the long-term the demand for Christmas trees, and fuelwood will exceed the allowable cutting limits.

Range improvements will increase the supply of dead fuelwood in the short term. However, in the long term, the land treated through vegetation conversions will reduce the acreage available to the forestry program. While some Christmas trees may be harvested in 20 to 30 years from these areas, recovery is uncertain. Land transfers will remove some acreage, however, the adverse impact will be small.

EGAN RESOURCE MANAGEMENT PLAN

Table 4-3

Economic Impacts to Livestock Grazing

Short-Term

ZONE	AUMs (+/-)	Increase in Gross Sales ($)	Increase in Net Income ($)	Increase in Livestock Industry Employment (FTE)[1]	Increase in Area Economy Income ($)	Increase in Area Economy Employment (FTE)
1. Buck and Bald/Diamonds	-15,312	-366,110	-176,547	- 11.3	-337,434	- 18.9
2. Duckwater/Buttes	- 2,900	- 69,339	- 33,437	- 2.1	- 63,908	- 3.5
3. Steptoe/Horse and Cattle Camp	-11,556	-276,304	-133,241	- 8.5	-254,664	- 14.2
4. Jakes Valley	- 866	- 20,706	- 9,985	- 0.6	- 19,084	- 1.0
5. West Lund Flats	- 519	- 12,409	- 5,984	- 0.4	- 11,437	- 0.7
Resource Area Total	-31,153	-744,868	-359,194	- 22.9	-686,527	- 38.3

[1] FTE: Full-Time Equivalent (2,000 hours).

EGAN RESOURCE MANAGEMENT PLAN

Table 4-4

Economic Impacts to Livestock Grazing

Alternative B

Long-Term

ZONE	AUMs (+/-)	Increase in Gross Sales ($)	Increase in Net Income ($)	Increase in Livestock Industry Employment (FTE)[1]	Increase in Area Economy Income ($)	Increase in Area Economy Employment (FTE)
1. Buck and Bald/Diamonds	-14,282	-341,483	-164,671	- 5.1	-314,736	- 8.6
2. Duckwater/Buttes	+ 376	+ 8,990	+ 4,335	+ 0.1	+ 8,285	+ 0.2
3. Steptoe/Horse and Cattle Camp	-10,836	-259,089	-124,939	- 3.9	-238,795	- 6.5
4. Jakes Valley	- 640	- 15,302	- 7,379	- 0.2	- 14,103	- 0.3
5. West Lund Flats	+ 55	+ 1,315	+ 634	0	+ 1,212	0
Resource Area Total	-25,327	-605,569	-292,020	- 9.1	-558,137	- 15.2

[1] FTE: Full-Time Equivalent (2,000 hours).

VEGETATION

1. The successional stages of the various plant communities would move toward the desired levels of management.

In all zones there would be insignificant beneficial impacts to vegetation as short-term management actions encourage a more even utilization of forage.

In the long term, significant beneficial impacts to vegetation would be brought about by both short- and long-term management actions. Significant beneficial impacts are shown in Appendix 15 as the successional stages move toward the desired levels of development. Licensing livestock use at the 3-year average licensed use in the short term and adjusting grazing use through monitoring to achieve sustained-yield utilization levels would benefit vegetation by improving areas of overgrazing. Although adjustments in grazing use and changes in season of use are expected, monitoring data is not available at this time with which to project the magnitude of the adjustments in this plan.

One of the main objectives of proper livestock management is to increase available forage use while improving ground cover, species composition, plant vigor and density. These changes would be brought about, in part, by various range improvements.

The physiological needs of plant species would be met by implementing proper grazing management plans and range improvement projects. The various plans and projects would promote vigor and seedling success of forage species by rest and deferment, promote seed planting of forage species by the mechanical action of animal movement following deferment, reduce effects of repeated overuse of preferred areas that commonly occur with continuous grazing, and increase animal productivity as a consequence of increasing forage production.

Water developments would improve the distribution of livestock. Uniform utilization of the range and rest during critical periods of growth reduce the effects on plants due to year-long and overgrazing.

Vegetation conversion would provide additional vegetation for grazing during the critical spring growing season. Reducing utilization levels on the native vegetation during the spring growing season would allow the vegetation to improve, while at the same time increase the total amount of forage available for grazing.

LIVESTOCK GRAZING

1. Present licensed use would remain unchanged.

This alternative proposes that livestock use in all management zones would continue at the 3-year average licensed (123,461 AUMs). These livestock levels are as follows: management zone 1 is 27,738 AUMs or 48 percent of preference; management zone 2 is 43,529 AUMs or 56 percent of preference; management zone 3 is 36,899 AUMs or 64 percent of preference; management zone 4 is 2,822 AUMs or 37 percent of preference; and management zone 5 is 12,473 AUMs or 81 percent of preference.

Therefore, in the short term there would be no significant impacts to livestock operators in any of the management zones. In the long term, however, vegetation would move toward a desired level of management, due to the implementation of varous management actions, including livestock management and range improvement projects. Water developments required in the implementation of grazing systems and allotment management plans would make additional AUMs available to livestock, since it would result in more even livestock distribution. 20,200 acres of vegetation conversion, primarily crested wheatgrass seedings, would provide additional forage as a direct result of the seeded grasses.

In addition to the construction of various range improvement projects, grazing systems, an integral part of any allotment management plan, would be implemented. Grazing systems may require greater stocking rates on smaller portions of the allotment. This increased utilzation in the grazed areas allows the ungrazed areas to rest while providing more even utilization of the vegetation in the grazed areas. The plants in the ungrazed areas are allowed to increase vigor, storage and reproduction which leads to increased production the following year. These positive aspects of rest outweigh the increased utilization in the grazed years (Shiflet and Heady, 1971; Hickey, 1971). Based on a review of grazing systems in the western states by Van Poolen and Lacey (1979) and the professional judgement of the resource area staff, it is estimated that a ten percent increase in AUMs would be realized through implementation of grazing systems and allotment managmeent plans.

Range improvement projects which benefit livestock alone, would account for nearly 4,747 AUMs increase, which would result in the projected long-term livestock use levels up to 128,208 AUMs. A ten percent increase in AUMs resulting from the implementation of grazing systems, over the long term, would amount to an additional 12,346 AUMs. A portion of this increase would be available to livestock and this would result in a significant beneficial impact to livestock operators.

2. Livestock management problems would occur as a result of land disposals.

This alternative proposes the eventual disposal of public land in 34 grazing allotments, totaling some 79,888 acres. This would affect 43 livestock operators if these lands are acquired by someone other than the livestock operator in the affected allotment, a significant adverse impact to that livestock operator could result. These impacts would be both short and long term and are expected to be of a lesser magnitude under this alternative than under alternative D, but of a greater magnitude than those under alternative A and B.

3. Added costs to livestock operators would occur because of wilderness designation.

With wilderness designation, all access routes determined to be roads and noticeable ways, which were cherry stemmed during the BLM's wilderness inventory, would remain open to all vehicle traffic. All existing range improvements have access to them.

New range developments will only be permitted when they will better protect the rangeland or the wilderness resource. Costs of new developments will be higher in wilderness areas than outside because of the emphasis placed on use of the least impairing construction methods and most environmentally compatible materials. Cost increases will be within reason. There area currently no range projects proposed in the suitable portions of the wilderness study areas.

WILDLIFE

1. Numbers of big game would increase.

In the short term, big game numbers will increase slightly. This is an insignificant beneficial impact. The slight increase in numbers will be due primarily to an increase in vegetation. The increase in vegetation will result from better livestock distribution through the implementation of grazing systems and the construction of range improvement projects. Several projects will be constructed to benefit wildlife and these will provide an additional 6,435 AUMs of forage.

In the long term, big game numbers will increase significantly due to an increase in vegetation and the construction of range improvement projects. It is estimated that a ten percent increase in AUMS would be realized through the implementation of grazing systems (Van Poolen and Lacey, 1979). A portion of these AUMs would be available to wildlife. This, plus the additional 6,435 AUMs resulting from range improvements, would result in a significant beneficial impact to livestock over the long term.

2. Big game herd distribution would increase.

In the short term, big game distribution density within use areas will increase insignificantly. The proposed guzzlers and various other water projects bringing free water into areas lacking free water will make forage available that was not available prior to the project. With monitoring and adjusting livestock and wild horses accordingly to achieve proper utilization of the range forage resource, big game distribution and density within use areas will significantly increase.

3. Distribution of small game species would increase.

In the short term, small game species distribution will increase insignificantly. Small game species are generally tied to both stream and other riparian areas. With monitoring and adjusting wildhorses and livestock to achieve proper utilization of range forage resource, riparian areas will improve. In the long term stream riparian will move toward the desired condition class and other riparian vegetation will move one successional stage toward the desired small game species distribution and density will significantly increase. (See Appendix 15)

4. Distribution of upland game would increase.

In the short term, upland game species will increase in distribution. Proposed guzzler installation, other water projects along with monitoring and adjusting wild horses and livestock to obtain proper utilization of the range forage resource, will make available more grasses and forbs essential for upland game specie maintenanace. In the long term, upland game species distribution will increase significantly.

5. Distribution of nesting raptors would increase.

In the short term, nesting raptor species will remain static with possibly a slight increase. In the long term, nesting raptors will increase significantly. Proposed grazing systems with a rest pasture rotation cycle in pastures with aspen vegetation types will move the aspen toward the desired and more mature clones of aspen, thereby increasing nesting opportunities for buteos, owls, and accipiters.

6. Stream riparian habitat would increase in condition class.

In the short term, stream riparian habitat will remain in the same condition class it presently is in. In the long term, stream riparian habitat will remain the same or move toward the desired condition class by utilizing grazing systems in pastures with stream riparian areas. Utilizing proposed season of use changes will also allow for the vegetation to be able to store more plant reserves (Stoddard and Smith, 1955).

7. Reintroductions of native wildlife species would be supported.

In the short term, reintroduction of native wildlife species will be supported on a case by case basis. Where monitoring shows forage is adequate for the proposed specie to be reintroduced, the reintroduction of the specie will be supported. In the long term, proper utilization will be achieved by adjusting livestock and wild horse use of the range forage resource. Reintroductions of native wildlife species will be supported in all zones.

WILD HORSES

1. Wild horse numbers would not decline.

In the short term, wild horses will increase slightly. This is an insignificant beneficial impact. The slight increase in numbers will be due primarily to an increase in vegetation. The increase in vegetation will result from better livestock distribution through the implementation of grazing systems and the construction of range improvement projects.

In the long term, wild horse numbers will increase significantly due to an increase in vegetation and the implementation of grazing systems. It is estimated that a ten percent increase in AUMs would be realized through the implementation of grazing systems (Van

Poolen and Lacey, 1979). A portion of these AUMs would be available to wild horses. This would result in a significant beneficial impact to wild horses over the long term.

2. Herd viability would be enhanced.

There will be no significant impacts in any zones with horses except zones 4 and 5, where there will be a significant beneficial impact. Herd viability will be increased by relocating wild horses from other zones to supplement the existing 20 horses in zones 4 and 5. A minimum of 30 horses will be relocated into the zones 4 and 5.

3. The free-roaming nature of wild horses would be preserved.

There will not be a significant impact to the free movement of wild horses in any zone. No action will be taken that will interrupt or change the migration or other movement of the majority of wild horses.

4. Areas where wild horses existed in 1971 would be preserved.

There will be no significant impact in any zone. All wild horse areas which were inhabited by wild horses in 1971 will continue to be managed as wild horse areas.

5. Death loss during capture operations would not exceed 2 percent.

There will be no significant death loss impact in any zone during wild horse gathering operations. Historically, death loss during gathering operations has been less than 2 percent in the Ely District. During gathering operations it is anticipated that some horses will be destroyed for reasons other than the gathering operation itself. These reasons would include disease, age, and pre-existing injuries. Few wild horses are actually injured during gathering operations.

6. Existing wild horse characteristics or traits would not be eliminated.

There will be no significant impact on wild horse characteristics or traits in the Egan Resource Area. The random removal of wild horses will insure that no wild horses with specific characteristics or traits are preselected for removal.

REALTY MANAGEMENT

1. Community expansion and agricultural development needs would be accommodated.

The disposal of up to 79,888 acres over the long term (20 years) would result in a transfer of up to 4,000 acres per year to meet demands for land for a variety of purposes. Refer to Table 4-1, for estimated acreages by land use classification that will be disposed by Alternative C. Refer to the Lands and Wilderness (Alternative C) Map at the end of Chapter 2 for the lands identified for potential transfer. It should be noted that, because of the small scale, these maps are for general location only and should not be considered completely accurate.

The small rural communities of White Pine County are surrounded by federal land and private land available for development is relatively limited. Any substantial increase in the size of the communities or the amount of agricultural land is dependent upon the availability of federal land. In the short term, community expansion and agricultural development would not be affected. Over the long term there would be no significant effect on community expansion and agricultural development in zones 1 and 4. This is because no communities exist and the potential for additional irrigated agricultural development is insignificant. It is expected that the anticipated agricultural development possible in zones 2 and 5 can be accommodated (BLM, U.S.D.I. study), resulting in a significant beneficial effect over the long term. Over the long term there would be no significant effect on community expansion in zones 2 and 5 because sufficient private land exists adjacent to the small communities to meet nearly all community expansion needs. Should any federal land be needed for community expansion it would be accommodated resulting in a beneficial impact. In zone 3, there is anticipated to be some community expansion over the long term which would need federal lands to meet some of the growth. It is expected that there would be a slightly beneficial effect on community expansion as any needs for federal land will be accommodated.

Over the long term the amount of land suitable for agricultural development in the Steptoe Valley part of zone 3 is not anticipated to be significant. This is because of the expected allowance of most if not all the surplus groundwater by the State Engineer for preferred non-agricultural uses associated with community expansion industrial development, and planned agricultural development on existing private lands. The effect of allowing only small amounts of federal land in this part of zone 3 for irrigated agricultural development is expected to be only slightly beneficial. However, there are some federal lands anticipated to be developed for irrigated agricultural development in the White River Valley area of zone 3 over the long term. This would result in a significant beneficial effect over the long term if this is the highest and best use of the surplus groundwater available for appropriation. There would be some increase in the need for utilities, roads, and services.

2. **Utility and transportation companies would benefit from long-range planning for major facilities.**

Rights-of-way applications are presently processed on a case-by-case basis, with little thought given to long-range utility corridor planning. This method leads to a disorderly and unplanned pattern of rights-of-way on the landscape, more often than not, almost precisely in the location of the original application. Many times the granting of the right-of-way is slowed down, while potential impacts are mitigated. This is time-consuming and inefficient for both the BLM and the applicant. This lengthy application process and the uncertainty as to whether the right-of-way will be granted does not benefit utility and transportation companies and hinders development of accurate long-range plans.

It is anticipated that two utility and transportation corridors would be designated, one running north and south, and one running east and west. Three would be planned, two running north and south and one east and west. These corridors will accommodate both the short- and long-range plans of the utility industry for major facilities. This would be significantly beneficial to the utility industry.

WILDERNESS

1. **Portions of all four wilderness study areas would be designated as wilderness. Wilderness values would be protected over the long term in these portions, but would be lost in the unsuitable portions of all four wilderness study areas.**

Recommended Acreage

WSA	Suitable Acres	Nonsuitable Acres
Goshute Canyon	26,436	9,158
Park Range	38,573	8,695
Riordan's Well	45,791	11,211
South Egan Range	57,660	39,256
	168,460	68,320

Refer to the Lands and Wilderness (Alternative C) Map at the end of Chapter 2 for recommended wilderness areas in this alternative. It should be noted that, because of the small scale, these maps are for general location only and should not be considered completely accurate.

The wilderness values and the integrity of the areas would be preserved under this alternative. This would include 4,649 acres of the Goshute Canyon Natural Area.

The beneficial impacts to wilderness would be the same as those discussed under the Preferred Alternative and Alternative B, but on 168,500 acres.

Negative impacts to the wilderness values are as discussed under Alternative A, but on 68,360 acres. The discussion would apply only to those unsuitable but manageable areas in Goshute Canyon Wilderness Study Area, Riordan's Well and South Egan Range Wilderness Study Area.

Manageability

All of the four areas recommended suitable in this alternative can be effectively managed to preserve their wilderness characteristics. Boundaries were adjusted in the alternative to remove manageability conflicts.

Conclusion

Preserving the wilderness characteristics of the Goshute Canyon Wilderness Area, South Egan Range Wilderness Study Area, and Riordan's Well Wilderness Study Area will result in a significant beneficial impact to the wilderness resource. Beneficial impacts would occur from designation of the Park Range but these are not significant since it is not expected to lose its wilderness values in the long term.

Designation of portions of four wilderness study areas as wilderness would help balance the geographic distribution of areas in the National Wilderness Preservation System; would expand the diversity of ecosystems represented in the Wilderness System; and would expand opportunities for primitive recreation and solitude in designated wilderness areas available to three Standard Metropolitan Statistical Areas.

The Egan Resource Area Wilderness Technical Report will contain a detailed analysis of the impacts associated with this alternative as they relate to wilderness.

MINERALS AND ENERGY

1. Mineral development would be adversely and significantly impacted because of wilderness designation.

a. Goshute Canyon Wilderness Study area - Mineral development will be adversely and significantly impacted due to the withdrawal of over 10,000 acres of moderate mineral potential from mineral entry.

There will be insignificant adverse impacts to energy exploration and development since all land withdrawn from leasing has low potential for oil and gas or geothermal occurrence.

The remainder of the three wilderness study areas will have insignificant adverse impacts to both mineral development and oil and gas as well as geothermal exploration.

b. Park Range Wilderness Study Area - Partial designation of this area as wilderness will have an insignificant adverse impact on mineral exploration and development. The potential is low for accumulation of mineral resources. Adverse impacts to oil and gas exploration and development are insignificant. Moderate geothermal potential would be included in the suitable areas on 16,420 acres along benches, and would become unavailable for development. This is not significant because of the area's remoteness.

c. Riordan's Well Wilderness Study Area - Partial designation for the Riordan's Well Wilderness Study Area would be an insignificant adverse impact. The suitable area has 1,230 acres of moderate mineral potential. Insignificant adverse impacts to energy exploration and development would occur within this area due to the low probability for occurrence for oil and gas or geothermal resources.

d. South Egans Wilderness Study Area Insignificant adverse impacts would be realized from partial wilderness designation of this wilderness study area. The suitable area has 4,300 acres of moderate mineral potential.

Removal of the suitable portion of the wilderness study area from energy exploration and development would also create insignificant adverse impacts.

SOCIAL ANALYSIS

Except for wilderness, impacts under this alternative would be similar to those under the Preferred Alternative for the ranching, local, regional and national communities.

The wilderness impacts would be similar to those in alternative B.

ECONOMIC ANALYSIS

Wilderness

No significant economic effect. Refer to discussion under Preferred Alternative.

Realty Management

Lands identified for disposal under this alternative are the same as those included in the Preferred Alternative. Refer to Preferred Alternative for discussion. There could be adverse financial impacts on local governments if the tax revenues from the private land do not meet the expenses incurred in providing such services to outlying developments in any of the zones over the long term.

Livestock Grazing

Livestock grazing proposals and AUM reduction are the same as those included in the Preferred Alternative. Refer to Preferred Alternative for discussion. Table 4-5 provides details of the long-term economic impacts.

FORESTRY

1. The forestry acreage base for determining available timber resources would be significantly reduced from Alternative A.

Under this alternative 342,441 acres would be available to the forestry program.

The impacts will be the same as in Alternative B, but the causes will be slightly different. Range improvements and land transfers will have a greater effect in reducing the acreage available to the forestry program. Wilderness study areas will not adversly impact the forestry program as much. A limited suppression fire management policy will be implemented which will result in a small increase in areas burned. Except for catastrophic fires, this impact will be minimal.

Table 4-5

Exonomic Impacts to Livestock Grazing

Alternative C

Long-Term

ZONE	AUMs (+/-)	Increase in Gross Sales ($)	Increase in Net Income ($)	Increase in Livestock Industry Employment (FTE)[1]	Increase in Area Economy Income ($)	Increase in Area Economy Employment (FTE)
1. Buck and Bald/Diamonds	+ 1,789	+ 42,775	+ 20,627	+ 0.6	+ 39,424	+ 1.0
2. Duckwater/Buttes	+ 4,269	+102,072	+ 49,222	+ 1.5	+ 94,078	+ 2.5
3. Steptoe/Horse and Cattle Camp	+ 2,471	+ 59,082	+ 28,491	+ 0.9	+ 54,459	+ 1.5
4. Jakes Valley	+ 72	+ 1,722	+ 830	0	+ 1,586	0
5. West Lund Flats	+ 2,581	+ 61,712	+ 29,759	+ 0.9	+ 56,878	+ 1.5
Resource Area Total	+11,182	+267,363	+128,929	+ 3.9	+246,425	+ 6.5

[1] FTE: Full-Time Equivalent (2,000 hours).

ALTERNATIVE D

VEGETATION

1. The successional stages of the various plant communities would not move toward the desired levels of management.

In the short term, there will be an insignificant adverse impact upon vegetation in zones 1 and 2. In zones 3, 4, and 5 there will be no change in vegetation over the next five years. In the long term, the vegetation in zone 3 will experience an insignificant adverse impact. In zones 1, 2, 4, and 5 over the long term, however, there will be a significant adverse impact upon vegetation.

The impacts to vegetation in zones 1, 2, 4, and 5 over the long term would be significantly adverse as a result of the heavy utilization of vegetation. Appendix 16 shows the movement away form the desired levels of management, due to heavy utilization of vegetation.

The adverse impacts on vegetation from heavy stocking rates would result in deterioration of vigor and production of key management species, which would result in reduced plant vigor and/or total loss of certain species from individual vegetation communities. Cook, et. al., (1964) indicated in relation to effect of intensity of harvesting, without exception, the more of the herbage that is removed, the more plants died and the smaller were the remaining plants.

Based on the above discussion it is anticipated that the heavy utilization of the vegetation resource would cause further degradation of the plant species, thus, heavy grazing intensity (overuse) would contribute to the signifcant adverse impact on vegetation communities in all zones.

This deterioration would also be caused by the existing periods-of-use which allow early livestock turnouts (March and April) in most allotments. In addition, the majority of livestock permittees in the resource area are licensed for various periods of winter use, thus resulting in year-long livestock grazing. The following cited references are indicative of how the existing periods-of-use in the resource area would adversely impact the vigor of key management species. Trlica, et. al. (1971) indicated that depletion of carbohydrate reserves is believed to be a primary factor for loss in plant vigor and subsequent range deterioration. Pearson (1964) indicated, "In the grasses this critical period begins with the boot stage and closes with complete maturation of the fruit." Also, Pearson (1964) suggested as root reserves are depleted, thus plants become highly susceptible to injury. The present periods-of-use would result in further losses of root reserves which would cause a continued decline in vigor. Declining vigor would result in further degradation of vegetation communities.

Based on the above cited references and discussion, the existing periods-of-use would contribute to the overall significant adverse impact on vegetation communities in the resource area.

The allotments would stay as they currently are without allotment management plans and associated grazing systems. These allotments currently exhibit distribution and overuse problems and have early spring turnouts of livestock, which typifies heavy continuous livestock use. Kothmann, et. al. (1969) indicated from vegetation records kept on his study that heavy continuous grazing has resulted in a deterioration of the vigor and species composition of the vegetation resource.

LIVESTOCK GRAZING

1. Present licensed use would increase to above preference.

This alternative proposes that livestock use in all management zones would increase to above preference levels. The forage gained through the reduction in wild horse numbers would provide the increase (19,968 AUMs) above preference. This would be a 191 percent increase from the current three-year average licensed use. Increases proposed are as follows: management zone 1 is 65,785 AUMs (237 percent of the three-year average licensed use and 115 percent of preference); management zone 2 is 89,547 AUMs (205 percent of the three-year average licensed use and 115 percent of preference); management zone 3 is 58,014 AUMs (149 percent of the three-year average licensed use and 100 percent of preference); and management zone 4 is 7,606 AUMs (270 percent of the three-year average licensed use and 100 percent of preference); and management zone 5 is 15,364 AUMs (123 percent of the three-year average licensed use and 100 percent of preference). These increases would be short-term significant beneficial impacts to livestock grazing in all management zones in the resource area.

In the long term, however, there would be significant adverse impacts upon the vegetation due to heavy stocking rates. This would result in deterioration of vigor and production of key management species. This, in turn, would result in significant adverse impacts to livestock operators as the amount and quality of available forage decreased.

2. Livestock management problems would occur as a result of land disposals.

This alternative proposes the eventual disposal of public land in 35 grazing allotments totaling some 113,479 acres. This would affect 46 livestock operators. If these lands are acquired by someone other than the livestock operator in the affected allotment, a significant adverse impact to that livestock operator could result. These impacts would be both short- and long-term and are expected to be of a greater magnitude under this alternative than under the preferred alternative and alternatives A, B, and C.

3. Added costs to livestock operators would occur because of wilderness designation.

With wilderness designation, all access routes determined to be roads and noticeable ways, which were cherry stemmed during the BLM's wilderness inventory, would remain open to all vehicle traffic. All existing range improvements have access to them.

New range developments will only be permitted when they will better protect the rangeland or the wilderness resource. Costs of new developments will be higher in wilderness areas than outside because of the emphasis placed on use of the least impairing construction methods and most environmentally compatible materials. Cost increases will be within reason. There are currently no range projects proposed in the suitable portions of the wilderness study areas.

WILDLIFE

1. Numbers of big game would decrease.

In the short term, numbers of big game will remain static or decrease insignificantly. In the long term, numbers of big game will decrease significantly. This would result from the impact to vegetation as a result of heavy stocking rates.

2. Big game herd distribution would remain the same.

In the short term, big game herd distribution will increase insignificantly, due to the range improvement projects. In the long term as big game numbers decrease due to over-utilization of the range forage resource because of raising levels of livestock to above preference, big game distribution will remain the same or reduce insignificantly.

3. Distribution of small game species would decrease.

Small game species distribution will remain static or decrese insignificantly in the short term. Small game species are generally tied to riparian areas, both stream and other riparian areas. In the long term, unprotected stream riparian habitat would move one condition class toward the undesired and other riparian areas (see Appendix 16) would move one successional stage toward the undesired due to raising livestock levels to above preference. This will cause a reduction in fish populations, brooding habitat, critical to upland game species and habitat crucial for small game would be lost and a reduction of all upland and small game species is anticipated. In the long term small game specie distribution would decrease significantly.

4. Distribution of upland game species would decrease.

Distribution of upland game species will remain static or increase insignificantly in the short term due to the proposed range improvements, i.e. guzzlers and other water projects. In the long term, raising livestock to above preference levels will result in over-utilization. Upland game species are tied to riparian areas both stream and other riparian during the hot summer months for brooding puposes. Unprotected stream riparian areas will move one condition class toward the undesired and other riparian areas will move one successional stage toward the undesired due to over-utilization and upland game species distribution and population will decrease significantly in the long term.

5. Distribution of nesting raptors would remain static or decrease.

In the short term, nesting raptors will remain static. In the long term, as aspen vegetation types are moved one successional stage toward the undesired (see Appendix 16) mature stands of aspen will have understory vegetation removed by livestock being raised to above preference levels and, in turn, will create areas undesirable for nesting raptor species; i.e. accipters, owls, and buteos. Raptor nesting distribution will decrease insignificantly.

There will also be a loss of invertebrates, e.g., beetles and grasshoppers. This will be a loss of prey species for raptors that depend upon invertebrates (Kestrels and Swainson hawks).

6. Stream riparian habitat would decrease one condition class.

As a result of raising livestock numbers to preference levels, ongoing stream riparian degradation will continue.

Projected long-term impacts are that stream riparian habitat would decrease by one condition class.

7. Reintroduction of native species would not be supported.

Reintroductions of native wildlife species will not be encouraged nor supported because all available forage will be given to livestock.

WILD HORSES

1. Wild horse numbers would be reduced.

There will be a significant adverse impact in the short and long term in zones 1 and 2 if herds are reduced to 50 horses.

2. Herd viability would be lost.

There will be significant adverse impacts in zones 4 and 5. Horses will be maintained in this herd use area at a level in which herd viability is difficult to maintain.

3. The free-roaming nature of wild horses would be preserved.

There will not be a significant impact to the free movement of wild horses in any zone. No actions will be taken that will interrupt or change the migration or other movement of the majority of wild horses.

4. Areas where wild horses existed in 1971 would be preserved.

There will be no significant impact in any zone. All wild horse areas which were inhabited by wild horses in 1971 will continue to be managed as wild horse areas.

5. Death loss during capture operations would not exceed two percent.

There will be no significant death loss impact in any zone during wild horse gathering operations. Historically death loss during gathering operations has been less than 2 percent in the Ely District. During gathering operations it is anticipated that some horses will be destroyed for reasons other than the gathering operation itself. These reasons would include disease, age and pre-existing injuries. Few wild horses are actually injured during gathering operations.

6. Existing wild horse characteristics or traits would be eliminated.

There will be significant adverse impacts to wild horse characteristics and traits in zones 1 and 2. When wild horses in these herd use areas are reduced to fifty animals, due to the magnitude of the relocation, many characteristics would be lost. There will be no significant impact to wild horse characteristics or traits in zones 3, 4 and 5, since no horses would be removed.

REALTY MANAGEMENT

1. Community expansion and agricultural development needs would be unplanned and exceed the sustained yield capacity of the ground water resource.

The disposal of up to 113,479 acres over the long term (20 years) would result in a transfer of up to 5,674 acres per year for land for a variety of purposes. Refer to Table 4-1.

Also, refer to the Lands and Wilderness (Alternative D) Map at the end of Chapter 2 for the lands identified for potential transfer. It should be noted that, because of the small scale, these maps are for general location only and should not be considered completely accurate.

The small rural communities of White Pine County are surrounded by Federal land and private land available for development is relatively limited. Any substantial increase in the size of the communities or the amount of agricultural land is dependent upon the availability of federal land. In the short term community expansion and agricultural development probably would not be affected. Over the long term there would be a significantly adverse effect on community expansion and agricultural development in all management zones. This is because the existing demand for agricultural development in all the management zones will far exceed the capacity of these zones for agricultural development because of the limited ground water available for additional development on a sustained yield basis. Thus, there would be a significant adverse effect on existing and new agricultural development in these two zones over the long term.

Unplanned disposal of large amounts of federal land in advance of actual needs for community expansion or other nonagricultural development would probably result in an unwanted burden on local government to provide services. This would be especially the case where a large development with small lot sizes for recreational cabins or home sites were constructed in an outlying rural area far removed from the existing communities where services such as fire and police protection, roads, and schools are available. There could be adverse financial impacts on local governments if the tax revenues from the private land do not meet the expenses incurred in providing such services to outlying developments in any of the management zones over the long term.

3. Utility and transportation corridor opportunities would exceed reasonably expected needs.

Rights-of-way applications are presently processed on a case-by-case basis, with little thought given to long-range utility corridor planning. This method leads to a disorderly and unplanned pattern of rights-of-way on the landscape, more often than not, almost precisely in the location of the original application. Many times the granting of the right-of-way is slowed down, while potential impacts are mitigated. This is time-consuming and inefficient for both the BLM and the applicant. This lengthy application process and the uncertainty as to whether the right-of-way will be granted does not benefit utility and transportation companies and hinders development of accurate long-range plans.

The identification of many corridors would provide the maximum opportunity for utility and transportation companies to plan facilities. Also, including all routes for the proposed utility projects is extremely beneficial to these companies. This would be significantly beneficial in both the short and long term.

However, designating more utility corridors than actually expected to be needed over the short and long term could easily lead to a unnecessary amount of land being reserved or managed for a single use that may never materialize in certain corridors. The effect is to have a potential for a profusion of right-of-ways crisscrossing the resource area which in essence is not much better than an unplanned no corridor situation.

WILDERNESS

1. Portions of three wilderness study areas would be recommended for wilderness designation. Wilderness values in the long term would be protected on these portions, but would be lost in one entire unit, and in portions of the other three wilderness study areas.

Recommended Acreage

WSA	Suitable Acres	Nonsuitable Acres
Goshute Canyon	0	35,594
Park Range	34,042	13,226
Riordan's Well	30,363	26,639
South Egans Range	16,560	80,356
	80,965	155,815

Refer to the Lands and Wilderness (Alternative D) Map at the end of Chapter 2 for the recommended wilderness areas in this alternative. It should be noted that, because of the small scale, these maps are for general location only and should not be considered completely accurate.

The wilderness values would be preserved in Riordan's Well Wilderness Study Area and in the northern part of the South Egans Range Wilderness Study Area.

The beneficial impacts to wilderness would be the same as those discussed under the Preferred Alternative and Alternative B, but on 80,965 acres.

Negative impacts to the wilderness values are as discussed under Alternative A and apply here but on 155,895 acres. The discussion would apply to those unsuitable but manageable acres in the Goshute Canyon Wilderness Study Area, Riordan's Well Wilderness Study Area and the South Egans Range Wilderness Study Area.

Manageability

All three of the areas recommended suitable can be effectively managed to preserve their wilderness characteristics. Boundaries were adjusted in this alternative to remove manageability conflicts.

Conclusion

Preserving the wilderness characteristics of the Riordan's Well Wilderness Study Area and north-half of the South Egans Range Wilderness Study Area would result in a significant beneficial impact to the wilderness resource. Beneficial impacts would occur from designation of the Park Range but these are not significant. Significant adverse impacts will result in the long term to the wilderness character of the Goshute Canyon Wilderness Study Area and the Goshute Canyon Natural Area.

Designation of portions of three wilderness study areas as wilderness would help balance the geogrphic distribution of areas in the National Wilderness Preservation System; would expand the diversity of ecosystems represented in the Wilderness System; and would expand opportunities for primitive recreation and solitude in designated wilderness areas available to one Standard Metropolitan Statistical Area.

The Egan Resource Area Wilderness Technical Report will contain a detailed analysis of the impacts associated with this alternative as they relate to wilderness.

MINERALS AND ENERGY

1. Mineral development would be insignificantly impacted because of wilderness designation.

a. Goshute Canyon Wilderness Study Area - There will be no impacts to mineral development under this alternative as the Goshute Canyon Wilderness Study Area would not be recommended for wilderness designation thereby leaving the area open to minerals development.

b. Park Range Wilderness Study Area - There will be insignificant impacts to mineral, oil and gas potential in the suitable portion of this wilderness study area due to low potential. Moderate potential for geothermal energy occurs within the area recommended as suitable for designation, but this will be insignificant because of its distance from markets, transportation, and communication.

c. Riordan's Well Wilderness Study Area - There will be insignificant adverse impacts within this study area to mineral and energy development from designation. All of the acreage in the suitable portion has low potential for minerals and energy.

d. South Egans Wilderness Study Area - Since only 4,300 acres have moderate mineral potential in the suitable portion of the wilderness study area, wilderness designation will only have an insignificant adverse impact.

SOCIAL ANALYSIS

If the assumption is made the ranchers in the resource area would increase their scale of operation to take advantage of the opportunity to graze at full active preference, the potential would exist for a significant beneficial impact on rancher wealth for a short period of time. However, the possibility exists that grazing at one hundred percent (100%) of active preference for 3 to 5 years may abuse the range in one or more of the management zones to the extent that by the third to fifth year monitoring data may indicate the need to drop licensing below current levels. The operators most likely to be affected would be those who graze on allotments where monitoring data would indicate that significant portions of the allotment(s) are in a downward trend. Should this occur, some of those operators may be forced out of business and perhaps in some cases would have to leave the area in search of alternative employment. For those individuals, that would be a significant adverse impact.

Wildlife interests may oppose the implementation of this alternative since those range improvements projects that would be developed are those which would be judged to be most essential to livestock management and enhancement without regard to other use. This situation would be further aggrevated by three additional elements of this proposed alternative. First, wildlife improvement funds would be used for those projects which would benefit livestock as well as wildlife and wild horses. Second, habitat would be managed for existing levels of wildlife species with reintroductions of big game species neither being supported or encouraged by the BLM. Third, in the long term, the amount of vegetation available for big game and wild horse use would change from that allocated during the short term. The implementation of these proposals may be viewed by wildlife interests as having a significant adverse impact on wildlife.

Wild horse interests could be expected to oppose the implementation of this alternative for many of the same reasons that wildlife interests could be expected to oppose it. In addition, the significant reductions which are proposed in wild horse numbers; i.e., reducing to fifty (50) animals per herd management area except for Monte Cristo and Jake's Wash area, may be unacceptable to one or more of the wild horse stakeholder groups. The implementation of this alternative would probably be viewed as having a significant adverse impact on the wild horse population by one or more of those groups. This would further strain relationships between those groups and the BLM.

Impacts as a result of implementing proposed realty management actions in this alternative would be similar to but of greater magnitude than those of the Preferred Alternative.

Over a prolonged period of time, wilderness characteristics and values may be irretrievably lost on the 155,895 acres dropped from further consideration. This would be considered a significant adverse impact by those who endorse wilderness designation.

The implementation of this alternative would probably be favorably received by those area residents who withheld support for the Wilderness Study Program because of their concern about potential mineral deposits within the study area.

Local Community

Impacts from implementing this alternative on the local community could be both beneficial and adverse, perhaps significantly so in both cases. Implementation might briefly enhance the viability of the area's ranching industry, with effects on the local commmunity including some increases in economic viability. However, if subsequent significant AUM reductions were to be imposed, the local effects may be felt community-wide. If some ranching operations were to fail, accompanied by the subsequent out-migration of some local ranchers, several negative impacts may evolve, including reduced economic viability, a deterioration of established social interrelationships and leadership structures, and a deterioration of the continuity and stability which are valued components of the local lifestyle.

Regional and National

Implementation of this alternative may result in severe adverse impacts for regional and national interest groups, especially those who actively support wildlife, wild horse, and wilderness programs in the resource area. These groups, plus other interest groups with other than a livestock orientation, could be expected to reject the concept of increased prioritization of livestock grazing in the area, particularly in light of their assertions of overgrazing. Implementing this alternative would increase conflicts and tensions and the probability of legal confrontations between each of these groups and BLM.

ECONOMIC ANALYSIS

Wilderness

No significant impact. Refer to discussion under Preferred Alternative.

Realty Management

Complete transfer of the 113,479 acres identified under this alternative, excluding the 3,760 acres proposed for Recreation and Public Purposes, would increase private ownership of land in White Pine County by approximately 56 percent, and increase the fair market value of private land in the county by $37.3 million. Assessed valuation would increase by more than $13 million, and provide tax revenues of more than $304,000. The loss in BLM payments in lieu of taxes is estimated at $8,454.

See Appendix 12 for details.

Livestock Grazing

Ranch wealth, net ranch income, livestock industry employment and area economy employment would be significantly beneficially impacted under this alternative. Ranch wealth, in the short term, would increase by $1.2 million, and net ranch income would increase by $1.3 million throughout the resource area.

Livestock industry employment would increase by 83.3 full-time equivalents (2,000 hours), and total economic area employment would increase by slightly more than 139 jobs in the short term. Area economy income would be expected to increase by $2.5 million.

Significantly beneficial impacts occur within zones 1 and 2 to net ranch income, livestock indusry employment, and area economy employment. Zone 3 shows significant and beneficial impacts in net ranch income and livestock industry employment. See Table 4-6 for details of the short-term economic impacts to livestock grazing under this alternative.

Long-term effects are indeterminate until sufficient data is provided from range monitoring programs, upon which additional adjustments would be based. With the implementation of grazing systems and range improvements, livestock grazing and the well-being of the community, which derives benefits from livestock-associated income and employment would improve in the short term. If, however, livestock grazing is unable to continue at above preference because of the results of monitoring, any loss in income and employment would be proportionate to the net change in grazing levels.

FORESTRY

1. The forestry acreage base for determining available timber resources would be reduced from Alternative A but not significantly.

Under this alternative 365,616 acres would be available for forestry. The impact of fire management program will be the same as Alternative C. Reductions in wilderness designation recomendations will allow additional acreage to be made available to the forestry program. The forestry program will lose some acreage as a result of range improvements.

EGAN RESOURCE MANAGEMENT PLAN

Table 4-6

Economic Impacts to Livestock Grazing

Alternative D

Short-Term

ZONE	AUMs (+/-)	Increase in Gross Sales ($)	Increase in Net Income ($)	Increase in Livestock Industry Employment (FTE)[1]	Increase in Area Economy Income ($)	Increase in Area Economy Employment (FTE)
1. Buck and Bald/Diamonds	+38,047	+ 909,704	+ 438,682	+ 28.1	+ 838,453	+ 47.1
2. Duckwater/Buttes	+46,018	+1,100,290	+ 530,588	+ 34.0	+1,014,112	+ 57.0
3. Steptoe/Horse and Cattle Camp	+21,115	+ 504,860	+ 243,456	+ 15.6	+ 465,317	+ 26.2
4. Jakes Valley	+ 4,784	+ 114,385	+ 55,160	+ 3.5	+ 105,427	+ 5.9
5. West Lund Flats	+ 2,891	+ 69,124	+ 33,333	+ 2.1	+ 63,709	+ 3.5
Resource Area Total	+112,855	+2,698,363	+1,301,219	+ 83.3	+2,487,018	+139.7

[1] FTE: Full-Time Equivalent (2,000 hours).

ALTERNATIVE E

VEGETATION

1. The successional stages of the various plant communities would move generally toward the desired levels of management.

Under this alternative, all livestock would be removed from the public lands. Plant communities would need to be managed at those levels identified in Appendix 17 to be optimum for wildlife and wild horses. A significant beneficial impact on vegetation is expected as the communities move toward climax. Management actions bringing about these improvements to vegetation include the complete removal of livestock, managing wildlife at reasonable numbers, and managing wild horses at the 1982-83 levels. The subtstantial reduction in grazing would move the plant communities toward the desired levels of management, for the most part. This would also allow key management species to complete growth cycles with little or no grazing pressure. Plants which have been relieved of grazing pressure would increase carbohydrate reserves which would result in increased vigor and reproductive parts that would promote seedling establishment. Vigor would be restored, usually within one to eight years (Trlica, et. al., 1977).

The vegetation communities would then begin to move toward climax because, "Partial or complete protection from grazing on deteriorated rangeland releases the vegetation from disclimax status, and secondary succession follows." (Tueller, 1973). This would be true in most vegetation communities.

Elimination of livestock grazing from the public lands would mean that there would be little if any funding available for range improvements. Eventual loss of many pipelines and walls would tend to concentrate wildlife and wild horse use, creating an insignificant adverse impact to the vegetation communities surrounding those remaining waters.

In some vegetation communities, however, climax condition is not the most desirable. Therefore, this movement toward climax would be a significant adverse impact to the sagebrush and pinyon-juniper communities, but as a whole, the vegetation communities would benefit significantly from this alternative.

LIVESTOCK GRAZING

1. Present licensed use would decrease.

Under this alternative, all domestic livestock grazing on BLM-administered public land within the resource area would be eliminated. This alternative would require permittees to reduce their herds to a size that could be maintained on their base property, purchase feed, move to rented pastures outside the resoruce area, or go out of the livestock business. This would be a significant adverse impact to livestock grazing in the Egan Resource Area.

Specific impacts to the communities and economy of the area are discussed in the social and economic analysis sections of this alternative.

WILDLIFE

1. Numbers of big game would increase.

The elimination of livestock grazing from BLM-administered lands within the resource area would make forage available far in excess of current big game needs. The increased forage availability would provide an opportunity for populations of existing big game animals to increase dramatically, exceeding reasonable numbers and approaching historic highs for such species as bighorn sheep which would benefit significantly from a change in vegetation toward a climax situation. Elk and antelope would also benefit significantly with increases likely to exceed reasonable number estimates. Mule deer, although favored by vegetation stages away from climax conditions, would benefit from increased forage and lack of livestock competition for overall population increases in excess of reasonable numbers. Refer to Appendix 17. Wild horses help to reduce vegetation which competes with bitterbrush on mule deer winter ranges (Reiner and Urness, 1981).

2. Big game herd distribution would increase.

Mule deer, elk, pronghorn antelope, and bighorn sheep inhabit the resource area. Bighorn sheep use is only during severe winters. With the elimination of livestock grazing vegetation will move toward the desired. More quality and quantity forage will be available to big game and increased survival of young of all big game species will be realized. With increased numbers of big game, distribution will increase significantly.

3. Distribution of small game species would increase.

Small game species are generally tied to riparian areas, both stream and meadow riparian. With the elimination of livestock grazing, meadow riparian will move toward the desired and stream riparian will increase one condition class toward the desired. Other vegetation types will also move toward the desired. Most vegetation types will experience a significant beneficial impact. Small game distribution and numbers will experience a significant beneficial impact.

4. Distribution of upland game species would increase.

With the elimination of livestock grazing upland vegetation sites will receive less use in the short term. In the long term, more forbs and grasses will be available for upland game species maintenance. Wet and upland meadows will receive less use which will move this vegetation type toward the desired which is a significant beneficial impact. Guzzler placement in areas lacking free water along with no livestock grazing will increase upland game species distribution significantly.

5. Distribution of nesting raptors would increase.

Nesting raptor distribution will increase significantly. Deciduous riparian stands of cottonwoods and clones of aspen will move toward the desired with the elimination of livestock grazing. These areas will receive much less use, more regeneration of the trees will survive and more stands and clones of these vegetation types will reach maturity creating more nesting sites for owls, accipters, and buteos. Raptor prey species will also increase with the absence of livestock grazing. There will be much less use imposed on native grasses and forbs essential for maintenance of raptor prey species. Raptor prey species will increase in numbers and distribution. Also, with the increased vegetation availability, more insects such as grasshoppers and beetles could become available for certain species of buteos, such as the Swainson's hawk.

6. Stream riparian habitat would remain the same.

In the short term, stream riparian habitat will increase in condition class significantly. In the long term, stream riparian habitat will improve one condition class on sites with more potential, a significant beneficial impact. There will be more fish available, sediment loads within the streams will decrease and stream flow will increase with increased riparian habitat condition. With less sediment load in the streams water quality will improve along with available spawning habitat. Water will be present later and further downstream than in the past with the improved riparian habitat. (Winegar, 1982).

7. Reintroduction of native wildlife species would be supported.

With the increased forage availability derived from the elimination of livestock grazing, reintroductions of native wildlife species will be encouraged and supported. This will be a significant beneficial impact to big game distribution from reintroductions of native wildlife species.

WILD HORSES

1. Wild horse numbers would increase.

In the short term, wild horse numbers will increase slightly in response to vegetation moving toward the desired level of management. This would be an insignificant beneficial impact.

In the long term, however, wild horse numbers will be kept at the 1982-83 levels through planned gatherings. With a significant increase in available forage and numbers kept to the 1982-83 levels, the remaining wild horses will have ample available forage, which will exceed each animal's individual needs for nutrition.

2. Herd viability would be enhanced.

There will be no significant impacts in any zones with horses except zones 4 and 5, where there will be a significant beneficial impact. Herd viability will be increased by relocating wild horses from other zones to supplement the existing 20 horse herd and by creating more available forage for those horses. A minimum of 30 horses will be relocated into zones 4 and 5.

3. The free-roaming nature of wild horses would be preserved.

There will not be a significant impact to the free movement of wild horses in any zone. No actions will be taken that will interrupt or change the migration or other movement of the majority of wild horses.

4. Areas where wild horses existed in 1971 would be preserved.

There will be no significant impact in any zone. All wild horse areas which were inhabited by wild horses in 1971 will continue to be managed as wild horse areas.

5. Death loss during capture operations would not exceed two percent.

There will be no significant death loss impact in any zone during wild horse gathering operations. Historically death loss during gathering operations has been less than two percent in the Ely district. During gathering operations it is anticipated that some horses will be destroyed for reasons other than the gathering operation itself. These reasons would include disease, age, and pre-existing injuries. Few wild horses are actually injured during gathering operations.

6. Existing wild horse characteristics or traits would not be eliminated.

There will be no significant impact on wild horse characteristics or traits in the Egan Resource Area. The random removal of wild horses will insure that no wild horses with specific characteristics or traits are preselected for removal.

REALTY MANAGEMENT

1. Some community expansion and agricultural development needs would be accommodated.

The disposal of up to 39,555 acres over the long term (20 years) would result in a transfer of up to 2,000 acres per year to meet demands for land for a variety of purposes. Refer to Table 4-1, Alternative B, for estimated acreages by land use classification: residential, commercial, etc. Refer to the Lands and Wilderness (Alternative B) Map at the end of Chapter 2 for the lands identified for potential transfer. It should be noted that, because of the small scale, these maps are for general location only and should not be considered completely accurate.

The small rural communities of White Pine County are surrounded by Federal land and private land available for development is relatively limited. Any substantial increase in the size of the communities or the amount of agricultural land is dependent upon the availability of federal land. In the short term, community expansion and agricultural development would not be affected. Over the long term there would be no significant effect on community expansion and agricultural development in zones 1 and

4. This is because no communities exist and the potential for additional irrigated agricultural development is insignificant. Over the long term some but not most of the public desired agricultural development in zones 2 and 5 can be accommodated (BLM, U.S.D.I. study). Even so there is anticipated to be a significant beneficial impact to the local economy.

Over the short term there would be no significant effect on community expansion in zones 2 and 5 because sufficient private land exist adjacent to the small communities to meet nearly all community expansion needs. Should any federal land be needed in zones 2 and 5 for community expansion it would be mostly accommodated resulting in a slightly beneficial impact.

In zone 3, there is anticipated to be some community expansion over the long term which would need federal lands to meet some of the growth. It is expected that there will be a beneficial effect as federal land would be accommodated.

Over the long term the amount of land suitable for agricultural development in the Steptoe Valley part of zone 3 is not anticipated to be significant because of the expected allowance of most if not all the surplus ground water by the State Engineer for preferred non-agricultural uses associated with community expansion, industry, and planned agricultural development on existing private land. The effect of allowing only small amounts of federal land in Steptoe Valley for agricultural development is expected to be only slightly beneficial.

However, there are some federal lands expected to be developed for irrigated agriculture in the White River Valley area of zone 3. Some of these federal lands would be made available for such use in this area of zone 3. Over the long term disposal of some federal land for agricultural development would have a significant beneficial effect on agricultural development in this area of zone 3.

There would be a slight increase in the need for utilities, roads, and services. Recreational and public purpose needs would be accommodated in any zone.

2. Utility and transportation companies would not benefit from long-range planning for major linear facilities.

Rights-of-way applications are presently processed on a case-by-case basis, with little thought given to long-range utility corridor planning. This method leads to a disorderly and unplanned pattern of rights-of-way on the landscape, more often than not, almost precisely in the location of the original application. Many times the granting of the right-of-way is slowed down, while potential impacts are mitigated. This is time-consuming and inefficient for both the BLM and the applicant. This lengthy application process and the uncertainty as to whether the right-of-way will be granted does not benefit utility and transportation companies and hinders development of accurate long range plans.

Establishing only one east-west and one north-south corridors with limited capacity for additional rights-of-way, does not accommodate the proposed projects or any future linear right-of-way projects. Thus, there would be a significant adverse effect on the plans of the utility industry in the short and long term.

WILDERNESS

1. The four wilderness study areas would be designated as wilderness. Wilderness values would be preserved over the long term on all but the unmanageable acres.

Recommended Acreage

WSA	Suitable Acres	Nonsuitable Acres
Goshute Canyon	35,594	0
Park Range	47,268	0
Riordan's Well	57,002	0
South Egan Range	96,916	0
	236,780	0

Refer to the Lands and Wilderness (Alternative B) Map at the end of Chapter 2 for recommended wilderness areas in this alternative. It should be noted that, because of the small scale, these maps are for general location only and should not be considered completely accurate.

In this alternative the wilderness resource would receive maximum protection, and this would help ensure the integrity of the wilderness resource. This alternative would include 5,009 acres of the Goshute Canyon Instant Study Area. This alternative would not, however, prevent some adverse impacts due to manageability problems. The beneficial impacts to wilderness would be as discussed under the Preferred Alternative, but on 236,780 acres. In addition, designation of the South Egan Range would improve the opportunities for primitive recreation within five hours drive of Las Vegas.

Manageability

The wilderness study areas could be managed to preserve their wilderness character in the long term. However, portions of the areas would be unmanageable as wilderness. In the long term mining activities associated with valid discoveries would likely impact approximately 4,000 acres in the southern end of Goshute Canyon Wilderness Study Area; 1,000 acres in the northern part of the South Egan Range Wilderness Study Area; and 500 acres in the western tip of Riordan's Well Wilderness Study Area. The South Egan Range Wilderness Study Area has one private inholding with no access. Since access is guaranteed, a road could be built through the wilderness Study Area. Portions of the perimeters of Goshute Canyon Wilderness Study Area, South Egan Range Wilderness Study Area, and Riordan's Well Wilderness Study Area would be difficult to manage to control off-road vehicle use, road extension and forest product removal.

Conclusion

Preserving the wilderness characteristics of the Goshute Canyon Wilderness Study Area, South Egan Range Wilderness Study Area, and Riordan's Well Wilderness Study Area would be a significant beneficial impact to the wilderness resource. Beneficial impacts would occur from designation of the Park Range but these are not significant since it is not expected to lose its wilderness values in the long term, even without designation. Designation of the four wilderness study areas as wilderness would help balance the geographic distribution of areas in the National Wilderness Preservation System; would expand the diversity of ecosystems represented in the Wilderness System; and would expand opportunities for primitive recreation and solitude in designated wilderness areas available to three Standard Metropolitan Statistical Areas.

The Egan Resource Area Wilderness Technical Report will contain a detailed analysis of the impacts associated with this alternative as they relate to wilderness.

MINERALS AND ENERGY

1. Mineral development would be adversely and significantly impacted because of wilderness designation.

a. Goshute Canyon Wilderness Study Area - A significant adverse impact would occur to mineral development due to withdrawal of high and moderate mineral potential from mineral entry. Most mining presently occurring on the periphery of the area would be unaffected unless it was desirable to follow a vein into the wilderness area.

b. Park Range Wilderness Study Area - Designation of this area as wilderness will have an insignificant adverse impact on mineral exploration and development. The potential is low for accumulation of mineral resources. Impacts to oil and gas exploration and development are insignificant adverse. Moderate geothermal potential would be included in the suitable areas along benches, and would become unavailable for development. This is not significant because of the areas remoteness.

c. Riordan's Well Wilderness Study Area - Full designation for the Riordan's Well Wilderness Study Area would be a insignificant adverse impact. This area has moderate mineral potential. Insignificant adverse impacts to energy exploration and development would occur within this area due to the low probability for occurance of oil and gas or geothermal resources.

d. South Egans Wilderness Study Area - Insignificant adverse impacts would be realized from full wilderness designation of this wilderness study area. This area has high and moderate mineral potential.

Removal of the wilderness study area from energy exploration and development would also create insignificant adverse impacts.

SOCIAL ANALYSIS

As was true in the adjacent Schell Resource Area, the consequences of this proposal would be the most adverse for all ranching operations in the Egan Resource Area. The impacts on the economic, psychological, and social well-being of the ranching sector would be significantly adverse. In the most extreme case, many, if not most, of the ranchers would go out of business if all grazing privileges on public lands were withdrawn. The gravity of this life change would be compounded by significant reductions in the value of the ranches so that owners' investments would not be returned by a sale. Ranchers would then have fewer resources with which to move and reestablish themselves elsewhere. In addition, ranching as an occupation, lifestyle and form of community would be almost entirely eliminated from the area. Those operators with grazing preferences in more than one BLM District may also suffer cumulative losses in AUMs that will affect them more adversely than others.

With increased numbers of ranchers and ranch hands leaving the area and competing for available jobs regionally, it would be exceedingly difficult for the local and regional economies to absorb them. Lack of re-training facilities in White Pine County (such as vocational-technical) would mean displaced ranchers would likely have to travel outside the area and perhaps the region to find work. Even nearby counties would be hard pressed to absorb them.

Other impacts are the same as those under Alternative B.

Local Community

Implementation of Alternative E would result in strong opposition from the local nonranching community. Lost business activity and a probable out-migration of some rancheers would contribute to instability, a potential leadership vacuum, and the disruption of established interactional patterns. Valued lifestyles derived from the ranching character of the area would be disrupted, and intense animosity toward BLM would emerge. In combination these changes would be disruptive in terms of community satisfaction and functional viability. Though nonquantifiable, there would therefore be a significant adverse overall impact on the local community.

Regional and National

Wild horse, wildlife, wilderness, outdoor recreation and natural resource protection stakeholder groups recognize the ranching sector as a prime contributor to the unique and valued social and economic climate of the area and do not advocate the complete elimination of grazing from the Egan Resource Area. Even though the implementation of this alternative would enhance opportunties for enjoyment of aesthetic and other amenities which these above groups may wish to preserve within the resource area, it could be expected that few if any of those stakeholder groups would actively support the implementation of this alternative.

ECONOMIC ANALYSIS

Wilderness

No significant economic impact. Refer to discussion under Preferred Alternative.

Realty Management

Lands identified for disposal under this alternative are the same as those included in Alternative B. Refer to Alternative B for discussion.

Livestock Grazing

Implementation of this alternative would result in the immediate loss of 123,461 AUMs of grazing on the public lands. Short-term effects upon ranch operations would be significant and severely adverse. Gross sales would decline approximately $3 million annually, with a corresponding loss in net ranch income of about $1.4 million and the loss of 91 jobs in the livestock industry. Ranch wealth would decline $10.8 million based on the loss of active preference. Table 4-7 provides details by zone.

EGAN RESOURCE MANAGEMENT PLAN

Table 4-7

Economic Impacts to Livestock Grazing

Alternative E

Short-Term

ZONE	AUMs (+/-)	Increase in Gross Sales ($)	Increase in Net Income ($)	Increase in Livestock Industry Employment (FTE)[1]	Increase in Area Economy Income ($)	Increase in Area Economy Employment (FTE)
1. Buck and Bald/Diamonds	-27,738	- 663,216	- 320,096	- 20.5	- 611,799	- 34.4
2. Duckwater/Buttes	-43,529	-1,040,778	- 502,325	- 32.2	- 960,093	- 54.0
3. Steptoe/Horse and Cattle Camp	-36,899	- 882,255	- 425,814	- 27.3	- 813,858	- 45.8
4. Jakes Valley	- 2,822	+ 67,474	+ 32,566	- 2.1	- 62,243	- 3.5
5. West Lund Flats	-12,473	- 298,229	- 143,938	- 9.2	- 275,109	- 15.4
Resource Area Total	-123,461	-2,951,952	-1,424,740	- 91.3	-2,723,102	-153.1

[1] FTE: Full-Time Equivalent (2,000 hours).

It is estimated that the multiplier effect of spending on the area economy would create an immediate loss of more than $2.7 million in income and 153 jobs. This represents 4.9 percent of income and 4 percent of employment in White Pine County. The additional effects of reductions in government employment and construction activity, as well as the loss in tax revenues, have not been calculated.

Area permittees rely on BLM rangeland for 46 percent of their vegetation requirements. Dependence on BLM land is even higher for those without Forest Service grazing privileges. This alternative would leave permittees who wish to remain in the livestock business with the option of either reducing herd size or acquiring additional forage. Additional forage could be obtained through the purchase or lease of additional private acreage, the purchase of hay, or the intensification of production on currently owned acreage.

However, private lands presently owned, leased, or available for leasing would not be adequate to maintain existing herd sizes due to the high percentage of land in the area under public ownership. Consequently, herd size reductions and/or the purchase of hay are the only feasible options available to ranch operators in the area.

Due to the costs imposed by either of these options, a number of area permittees are likely to be forced out of business. No quantification of this group is possible due to the myriad of variables involved. It is likely, however, that those ranches which have employed the highest levels of debt financing, those which have the highest degree of dependency on BLM vegetation, and those which command the smallest reserves of capital would be most severely affected.

Many area ranchers have stayed in the livestock business despite relatively low rates of return due to the lifestyle involved. This alternative would force reevaluation of the tradeoff between further income reduction and lifestyle retention. Alternative E would undoubtedly cause some ranchers to halt their livestock operations, and could cause others to cease their reliance on ranching as a primary source of income.

FORESTRY

1. The forestry acreage base for determining available timber resources would increase.

Under this alternative 341,696 acres would be available to the forestry program. Wilderness study areas will contain a large amount of the manageable forest lands. The short-term effect will be minimal as demand can be met by using other areas.

In the long term as the pinyon-juniper vegetation type moves toward climax, there will be a significant beneficial impact to forestry as the forestry base increases. The timber resource will eventually meet or exceed the demand for all wood products.

IRREVERSIBLE COMMITMENT OF RESOURCES

1. Any actions which result in disposals of public lands are considered irreversible, since the lands themselves will no longer be available for management.

2. Actions which result in permanent corridors being created are considered irreversible.

3. Areas which are wilderness in character but which lose these features as a result of management actions included within this RMP will sustain an irreversible loss.

4. Permanent grazing improvements such as water developments will be irreversible for the areas on which they are located.

5. Lowered vegetation productivity and changes in plant community composition which occur as a result of seedings, increased erosion from grazing, ORV activity, harvesting woodland products, or other vegetation disturbances could be irreversible.

6. Evaporation of water from newly-created impoundments would be an irreversible commitment.

IRRETRIEVABLE COMMITMENT OF RESOURCES

1. Generally, all fossil fuels, labor, capital, and unsalvageable construction materials used to implement the RMP constitute an irretrievable commitment of resources.

2. Any public lands sold or exchanged would be an irretrievable loss, since resources associated with them would no longer be managed for the benefit of the public.

3. Any construction or other action which would create a permanent scar or intrusion on public land having high recreation, wilderness, or aesthetic values would constitute an irretrievable commitment of resources.

4. Loss of recreational opportunities as a result of loss of access, land disposals, changes in wilderness character, or land treatments would be irretrievable.

5. Any loss of wildlife or fisheries resources over the short or long term would be irretrievable.

6. Construction or disposal which result in the loss of cultural resources are an irretrievable commitment of resources.

7. Soil erosion losses resulting from management activities are irretrievable losses.

8. Any loss of human resources such as a ranching operation going out of business as a result of implementation of the RMP would be an irretrievable loss.

9. Mineral resources removed as a result of implementing the management options in the RMP would be an irretrievable commitment.

SHORT-TERM USE VS. LONG-TERM PRODUCTIVITY

The following actions may affect overall productivity of Egan Resource Area public lands. Detrimental or beneficial impacts are identified as appropriate.

1. Land disposal actions for agricultural purposes would be beneficial over the long term with respect to vegetation productivity.

2. Land disposal actions for community expansion would be detrimental to natural resources productivity over the long term. Other land disposal actions would not be expected to have a significant impact on long-term productivity.

3. Actions which result in the maintenance of the current situation (Alternative A) in terms of livestock and wild horse grazing management would result in a long-term loss in productivity of livestock, forage, riparian/stream and wildlife habitat, soil and water resources, and the economic structure

of the farming community. Actions which enhance the vegetation resouces (including livestock and wildlife forage and habitats) will result in an increase in long-term productivity.

4. Maintenance of a no action policy for woodland products will result in a long-term loss of productivity.

5. Range seedings should improve productivity over the long term. However, unsuccessful seedings could lower productivity.

CHAPTER 5

LIST OF PREPARERS

CHAPTER FIVE

LIST OF PREPARERS

Berton Bresch, Sociologist, Masters Degree in Counseling, California State University at Sonoma. Five years experience. Responsible for social values and public attitudes analysis.

Hal Bybee, Wild Horse Specialist, B.S. Agricultural Range Management, University of Nevada at Reno. Seven years experience. Responsible for the wild horse sections.

Vearl Christiansen, Range Conservationist, B.S. Range Science, Brigham Young University. Six years experience. Responsible for the vegetation and range management portions.

Diane Colcord, Cartographer, B.S. Art Education, University of Oregon. Sixteen years experience. Responsible for cartography.

Benjamin Cope, Realty Technician, A.S. Associate of Science, Dixie College. Twenty-two years experience. Responsible for cartography.

William J. Lindsey, Range Conservationist, B.S. Range Resources, Oregon State University. Four years experience. Responsible for vegetation mapping.

Howard Hedrick, Egan Resource Area Manager, B.S. Range Resources, University of Idaho. Eight years experience. Responsible for directing the Egan Resource Management Plans Team.

Jerry R. O'Donnel, Clerk-Typist. Five months experience. Responsible for typing the Egan Resource Management Plan.

Paul Myers, Regional Economist, B.S. Economics, University of Nevada at Reno. Eleven years experience. Responsible for economic analysis.

Michael W. Perkins, Wildlife Management Biologist, B.S. Wildlife Science, Fisheries Science, Utah State University. Eight years experience. Responsible for the wildlife and fisheries sections.

Jacob Rajala, Outdoor Recreation Planner, M.A. Anthropology, M.S. Forestry and Range Management, Washington State University. Five years experience. Responsible for the wilderness portion.

Stephen Rynas, District Planning Coordinator, B.A. History, University of Maryland at College Park. Four years experience. Responsible for quality control.

Ronald Sjogren, Realty Specialist, B.A. Geography, San Diego State University. Twenty years experience. Responsible for the realty management sections.

Rita R. Suminski, Wildlife Management Biologist, M.S. Fisheries Science, New Mexico State University. Responsible for art work. (Schell Resource Area, Ely BLM District).

William D. Robison, Geologist, B.S. in Geology, San Diego State University. Six years experience. Responsible for minerals and energy sections.

NEVADA STATE OFFICE SPECIALIST REVIEW

Specialists in all fields from the Nevada State Office have reviewed this document for technical accuracy and consistency with Federal law and BLM policy.

CHAPTER 6

PUBLIC PARTICIPATION AND SCOPING

CHAPTER SIX

PUBLIC PARTICIPATION AND SCOPING

Preparation of the Egan Resource Management Plan was initiated in July 1981. To bring the public and other agencies into the Egan planning process, a mailing list has been developed to keep interested parties informed on the progress of the plan. Further, briefings, workshops, and newsletters have been prepared to encourage public contact and to solicit public input. At the end of this narrative is an abbreviated list of organizations that have been asked to contribute to this planning process.

On July 16, 1981 a "Notice of Intent" for the preparation of the Egan Resource Management Plan appeared in the Federal Register to formally "kick off" the beginning of the planning process. This initial phase involved developing the issues that the Egan Resource Management Plan would be addressing. To solicit public input the Ely District initiated a mass mailing to the people and organizations on the mailing list, issued press releases to the newspapers in Nevada and Utah; and presented briefings to the Nevada State Clearinghouse, Nevada Congressional delegations, local governments, Indian Tribes, Planning Commissions, and civic organizations. Of the six-hundred issue identification brochures which were distributed, just under one-hundred were returned. Basic issues which the public thought that the Egan Resource Management Plan should address were: grazing, wild horses, wilderness, and minerals.

In April, 1982 the issues and Planning Criteria for the Egan Resource Management Plan were released for public review. Just over ten comments were received from the public concerning this phase of the planning effort. The majority of the letters were supportive of this document and contributed additional criteria for inclusion into the planning process.

In January, 1983 the draft alternatives for the Egan Resource Management Plan were released for public review. This phase was preceded with a Federal Register notice, mass mailing, and press releases. Workshops were held in Ely (Feb. 15, 1983) and in Reno (Feb. 16, 1983). By the end of the public comment period just over twenty-five written comments were received. The majority of comments received were sent by the Nevada State Clearinghouse, ranching interests, mining interests, and conservation groups. Overall the respondents were in favor of alternatives which reduced wild horse populations, promoted economic development, and kept wilderness designation to a minimum. Briefings were offered to the Nevada Clearinghouse, the Nevada Congressional Delegations, and local governmental organizations, however, none was ever requested.

The following list of organizations and persons is an abbreviated version of the Egan Resource Management Plan mailing list. These organizations and persons will be automatically receiving a copy of this document. Copies of this document may be requested by writing to the Ely District at the address found in the introduction.

I. State Governmental Agencies
   A. Governor Richard Bryan
   B. Nevada's Congressional Delegations
   C. District 35 Assemblyman, Virgil Getto
   D. State Senator, Richard Blakemore
   E. Nevada State Clearinghouse

II. Federal Agencies
   A. Nevada State BLM Office
   B. Adjacent BLM District Offices
   C. Bureau of Indian Affairs
   D. Environmental Protection Agency
   E. Fish and Wildlife Service

F. Humboldt National Forest
G. National Park Service
H. Soil Conservation Service
I. White Pine County Extension Agent
J. Lincoln County Extension Agent
K. Nye County Extension Agent

III. Local Governmental Agencies
   A. White Pine County Commissioners
   B. Lincoln County Commissioners
   C. Nye County Commissioners
   D. Ely City Council
   E. White Pine County Regional Planning Commission
   F. Nye County Planning Commission
   G. Lincoln County Planning Commission
   H. Central Nevada Development Authority
   I. Preston/Lund Town Council
   J. McGill Town Council
   K. Ruth Town Council

IV. Public Libraries
   A. White Pine County Library
   B. Lincoln County Library
   C. Nevada State Library
   D. University of Nevada Library
   E. Nye County Library

V. BLM Advisory Councils
   A. White Pine County CRMP Committee
   B. Ely District Grazing Board
   C. Ely District Advisory Council
   D. Nevada State Grazing Board

VI. Indian Organizations
   A. Duckwater Tribal Council
   B. Ely Colony Council

VII. Conservation Groups
   A. American Horse Protection Association
   B. Animal Protection Institute
   C. National Wildlife Federation
   D. Natural Resources Defense Council
   E. The Nature Conservancy
   F. Nevada Archaeological Association
   G. Nevada Wildlife Federation
   H. Nevada Outdoor Recreation Association
   I. Sierra Club
   J. White Pine Sportsman's Club
   K. The Wilderness Society
   L. Wild Horse Organized Assistance
   M. The Wildlife Society

VIII. Grazing Interest
   A. Nevada Cattleman's Association
   B. Nevada Woolgrowers Association
   C. Society for Range Management
   D. Resource Concepts Incompany
   E. Egan Resource Area Permittees
   F. National Cattleman's Association
   G. White Pine County Farm Bureau

IX. Mining Interests
   A. Amselco Minerals, Inc.
   B. Atlantic Richfield
   C. Chevron Resource Co.
   D. Exxon Minerals Co.
   E. Kennecott Minerals Co.
   F. Northeastern Nevada Miners and Prospectors Association
   G. Nevada Mining Association
   H. Silver King Mines
   I. Superior Oil Company
   J. Texaco Inc.
   K. White Pine Minerals Corporation
   L. Boundy and Forman
   M. Ely Valley Mines
   N. Bear Creek Mining Co.
   O. Placer Amex

X. Electric Utilities
   A. Mt. Wheeler Power Company
   B. Sierra Pacific Power Company
   C. White Pine Power Project
   D. Nevada Power Company

XI. Miscellaneous Corporate Interests
   A. White Pine County Chamber of Commerce
   B. Pacific Legal Foundation
   C. Public Lands Institute
   D. Public Lands Council
   E. Renewable Resources Center
   F. Natural Resources Defense Council

XII. Newspapers
   A. Lincoln County Record
   B. Ely Daily Times
   C. KELY Radio
   D. Nevada State Journal
   E. Iron County Record
   F. Salt Lake Tribune
   G. Wells Progress
   H. Eureka Sentinel
   I. Millard County Chronicle
   J. Elko Daily Free Press
   K. Elko Independent

XIII. Periodicals
   A. Nevada Farm Bureau's Journal
   B. Habitat
   C. Toiyabe Trails
   D. Rangelands
   E. National Wildlife
   F. Rangeland News
   G. Great Basin Reporter

Availability of the Draft and Final Egan Resource Management Plan

Persons whose names appear on the Egan Resource Management Plan mailing list will receive notification of the availability of the draft and final documents. A statewide news release will also provide information for requesting personal copies of these publications.

Copies of the draft and final plan will be available for review at the libraries and offices listed below. For further information contact Howard Hedrick, Egan Resource Area Manager, Ely District Office, Star Route 5, Box 1, Ely, Nevada 89301.

BUREAU OF LAND MANAGEMENT OFFICES

Office of Public Affairs, BLM
18th and C Streets
Washington, D.C. 20240

Nevada State Office, BLM
300 Booth Street
P.O. Box 12000
Reno, Nevada 89520

Battle Mountain District Office, BLM
North 2nd and South Scott Streets
Battle Mountain, Nevada 89820

Carson City District Office, BLM
1050 E. William Street
Carson City, Nevada 89701

Elko District Office, BLM
2002 Idaho Street
P.O. Box 831
Elko, Nevada 89801

Ely District Office, BLM
Star Route 5, Box 1
Ely, Nevada 89301

Las Vegas District Office, BLM
4765 West Vegas Drive
P.O. Box 26569
Las Vegas, Nevada 89126

Winnemucca District Office, BLM
705 East 4th Street
Winnemucca, Nevada 89445

Utah State Office, BLM
University Club Building
136 East South Temple
Salt Lake City, Utah 84111

Salt Lake District Office, BLM
2370 South 2300 West
Salt Lake City, Utah 84119

Cedar City District Office, BLM
1579 N. Main Street
P.O. Box 729
Cedar City, Utah 84720

Richfield District Office, BLM
150 E. 900 N.
P.O. Box 208
Richfield, Utah 84701

Fillmore Area, BLM
P.O. Box 778
Fillmore, Utah 84631

PUBLIC LIBRARIES

White Pine County Library
Campton Street
Ely, Nevada 89301

Lincoln County Library
Caliente, Nevada 89008

Lincoln County Library
Pioche, Nevada 89043

Nevada State Library
Library Building
Carson City, Nevada 89710

University of Nevada, Las Vegas
James R. Dickinson Library
4505 Maryland Parkway
Las Vegas, Nevada 89154

University of Nevada, Reno
Getchell Library
Reno, Nevada 89507

APPENDICES

EGAN RESOURCE MANAGEMENT PLAN

Appendix 1

LIVESTOCK GRAZING STATISTICS BY MANAGEMENT ZONE

	Federal Acres	Periods of Use	3 Year Ave. Licensed Use (AUMs)	Preference (AUMs)	Wild Horse Use (AUMs)	Existing Wildlife Use (AUMs)	Reasonable Numbers of Wildlife (AUMs)	Wildlife Reintroduction Potential (AUMs)	Unmet Wildlife Demand (AUMs)	MIC Category (Allotments)	Range Improvement Projects [alternative]
Zone 1	736,050	Year Round	26,266 C	53,308 C	9,312	3,947 D	16,405 D	353 A	0	5 M	2,500 acres seeding D
			1,472 S	3,971 S						5 I	9 mile fence
										1 C	
											1,500 acre burn/seed C
											1/2 mile pipe trough C
											5 acre riparian D
											1,000 acre burn/seed DB
											5 mile fence
											1,000 acre burn DB
											Meadow rehab. B
											2 guzzlers BCD
											well CDB
											well C
											14 mile fence D
											2-1/2 mile fence D
											1 guzzler BCDE

EGAN RESOURCE MANAGEMENT PLAN

Appendix 1 (Continued)

LIVESTOCK GRAZING STATISTICS BY MANAGEMENT ZONE

	Federal Acres	Periods of Use	3 Year Ave. Licensed Use (AUMs)	Preference (AUMs)	Wild Horse Use (AUMs)	Existing Wildlife Use (AUMs)	Reasonable Numbers of Wildlife (AUMs)	Wildlife Reintroduction Potential (AUMs)	Unmet Wildlife Demand (AUMs)	MIC Category (Allotments)	Range Improvement Projects [alternative]	
Zone 2	1,756,807	Year Round	43,529	78,085	15,168	3,448 D	5,859 D	387 A	310	8 M	500 acre burn/seed/ fence	D
						230 A	642 A			8 I		
										1 C		
											15 mile fence	D
											13,440 acre burn	D
											1/2 mile fence	D
											well	BCD
											well and pipe	BCD
											2-1/2 mile fence	D
											5 + 3 mile pipe	BCD
											1,500 acre burn/seed/ fence	DB
											well	C
											5 guzzlers	BCD
											well	B
											well	DBC
											fence/seed 5 acres	DC
											well	C
											5 springs	BCD
											1,200 acre see/well	C
											2,000 acre burn/seed/ well	D
											1,500 acre burn	C
											4 mile pipe	D
											well	BCD

Appendix 1 (Continued)

LIVESTOCK GRAZING STATISTICS BY MANAGEMENT ZONE

	Federal Acres	Periods of Use	3 Year Ave. Licensed Use (AUMs)	Preference (AUMs)	Wild Horse Use (AUMs)	Existing Wildlife Use (AUMs)	Reasonable Numbers of Wildlife (AUMs)	Wildlife Reintroduction Potential (AUMs)	Unmet Wildlife Demand (AUMs)	MIC Category (Allotments)	Range Improvement Projects [alternative]	
Zone 3	962,878	Year Round	36,899	58,014	300	8,003 D	16,721 D	7 A	1,403	27 M	570 acre burn/seed	CD
						184 A	440 A	78 E		7 I	8,430 acre burn/seed	C
						906 E	4,806 E			8 C		
											2,500 acre burn/seed	D
											reservoir	BC
											windmill tower	B
											1,000 acre burn	D
											2,500 acre burn	BD
											1,000 acre burn/seed	D
											well	BC
											1,000 acre burn/seed/ well	BCD

EGAN RESOURCE MANAGEMENT PLAN

Appendix 1 (Continued)

LIVESTOCK GRAZING STATISTICS BY MANAGEMENT ZONE

	Federal Acres	Periods of Use	3 Year Ave. Licensed Use (AUMs)	Preference (AUMs)	Wild Horse Use (AUMs)	Existing Wildlife Use (AUMs)	Reasonable Numbers of Wildlife (AUMs)	Wildlife Reintroduction Potential (AUMs)	Unmet Wildlife Demand (AUMs)	MIC Category (Allotments)	Range Improvement Projects [alternative]
Zone 4	102.432	4/15 to 11/30	2,822	7,606	80	450 D	1,195 D	1 A	0	2 M 3 I 0 C	5 spring fence 7 meadows D H_2O fence B 1 spring E well D 1,000 acre burn D 5,000 acre burn/seed D 10 mile fence D well D seed/well/2,000 acre burn C 3 mile pipe & trough C

Appendix 1 (Continued)

LIVESTOCK GRAZING STATISTICS BY MANAGEMENT ZONE

	Federal Acres	Periods of Use	3 Year Ave. Licensed Use (AUMs)	Preference (AUMs)	Wild Horse Use (AUMs)	Existing Wildlife Use (AUMs)	Reasonable Numbers of Wildlife (AUMs)	Wildlife Reintroduction Potential (AUMs)	Unmet Wildlife Demand (AUMs)	MIC Category (Allotments)	Range Improvement Projects [alternative]
Zone 5	3,842, 216	Year Round	123,461	216,348	24,132	16,810 D 414 A 906 E	41,353 D 1,082 A 4,806 E	816 A 78 E	1,713	50 M 27 I 16 C	well BC 2,000 acre burn/seed/ well C 7 mile fence D well C well BC 2,000 acre burn/seed/ well BCD well D

Appendix 2

Selective Management Criteria

Category M

- Potential to increase forage production is low to moderate.
- Current forage production is near maximum.
- Little or no conflicts between resources.
- No change required in the current grazing practice to maintain or improve the vegetative resource.
- Current forage value is good.
- Current trend is upward or static.
- Moderate return on public investment.
- Social controversy is low.

Category I

- Potential to increase forage production is high.
- Current forage production is below maximum.
- Moderate to extreme resource conflict.
- A moderate to high degree of change in the current grazing practice is required to improve the vegetative resource.
- Current forage value is fair to poor.
- Current trend is static to downward.
- Moderate to high return on public investment.
- Social controversy is moderate to high.

Category C

- Potential to increase forage production is low.
- Current forage production is near maximum.
- Little or no conflicts between resource.
- No change required in the current grazing practice to maintain the vegetative resource.
- Current forage value is fair to poor.
- Current trend is static.
- Low return on public investment.
- Social controversy is low.

Criteria Definitions and M, I, C Classification

Production Potential - A professional judgment criteria, where range site data is not available. This criteria is based upon the lands potential to increase production, either naturally or artificially. On those areas where soils and range site data are available, they will be used.

High potential - I
Moderate potential - M
Low potential - C or M

Appendix 2 (Continued)

Selective Management Criteria

Present Management

Maintain - Present management implemented and meeting resource management objectives; no major revisions necessary.

Improve - Resource management objectives not being met; allotment in need of an AMP or grazing system; major revision of existing AMP needed.

Custodial - Present resource management appears satisfactory or is the only logical practice considering all other criteria.

Current Production - A professional judgment criteria used when there is a lack of range site data. A subjective rating of what the area is now producing compared to its potential.

Current forage production is near maximum - M or C
Current forage production is below maximum - I

Resource Conflicts -

Critical wildlife habitat, wild horse and burro/livestock use areas, recreation, water rights, mining, lands actions, A.C.E.C., reintroduction of plants and animals, soil, water, and air quality.

An interdisciplinary team will be used to determine the effect a limited number of the above mentioned criteria will have on present grazing management - M
One or more major conflicts must be present - I
Same as M - C

Forage Value - An allotment-wide rating. Professional judgment is used to determine if predominant vegetation is palatable and preferred by the type of livestock grazing the area.

Good - M
Fair - I or C
Poor - I or C

Appendix 2 (Continued)

Selective Management Criteria

Trend - An indication of the movement of successional stages in relation to the desired level based on monitoring studies, and professional judgment.

Upward - M
Static - M, I, or C
Downward - I

Economic Investment Potential - The potential for a positive economic return on investments.

High - I
Moderate - I or M
Low - C

Social Controversy - Professional judgment is used to determine areas where competition among user groups for the range resource products may result in debate over proper range management decisions; a.e., areas of intensive mining, important big game winter range, potential site for a power generating plant, etc.

Low - M or C
Moderate - High - I

EGAN RESOURCE MANAGEMENT PLAN

Appendix 3

Categorization of Allotments

Allotment	Production Potential	Current Production	Resource Conflicts	Management Practices	Forage Values	Range Trend	Invest. Return	Social Controversy	Final Designation
0129 Willow Springs 0915 (Conners Summit)	I	I	I	M/I	M/I	I	I	M/C	M
0401 Indian Creek	C	M/C	M/C	M/C	M	M	M	M	M
0402 Goshute Basin	I	M	M	M/C	M	M	M	I	M
0403 Cherry Creek	I	I	I	I	M/C	C	I	I	I
0404 Becky Creek	I	M/C	M/C	M/C	C	M/C	C	M/C	M
0405 North Steptoe	C	M/C	M/C	M/C	M	M	M	M/C	M
0406 Lovell Peak	C	M	M	M	M	M	M	M	M
0407 Schellbourne	C	M	M	I	M	M	I	M	M
0408 Whiteman Creek	I	I	M/C	I	I/C	I/C	M	M	C
0409 Bennett Creek	C	M/C	M/C	M/C	M	M	M	M/C	M

Appendix 3

Categorization of Allotments

Allotment	Production Potential	Current Production	Resource Conflicts	Management Practices	Forage Values	Range Trend	Invest. Return	Social Controversy	Final Designation
0410 Big Indian Creek	I	I	M/C	I	I/C	I/C	I	M/C	C
0411 Middle Steptoe	C	M	M/C	M/C	M	M	C	M	C
0412 Duckcreek Flat	C	I	M/C	M/C	M	M	I	M/C	M
0413 Gold Canyon	C	M	M/C	M/C	M	M	M	I	M
0415 Steptoe	I	I	M	M	M	M	M	M	M
0416 Heusser Mountain	I	I	M/C	M/C	M	M	M	M	M
0417 Second Creek	C	M	M	M	M	M	M	M	M
0418 Gallagher Gap	M	I	M/C	I	M	M	M	M	M
0419 Duckcreek Basin	I	M	M/C	M/C	M	M	M	M/C	M
0420 Schoolhouse Spring	C	C	C	C*	C	C	C	C	C

* Kennecott So_2 fallout limits product.

Appendix 3

Categorization of Allotments

Allotment	Production Potential	Current Production	Resource Conflicts	Management Practices	Forage Values	Range Trend	Invest. Return	Social Controversy	Final Designation
0421 Goat Ranch	I	I	M/C	M	I	I	I	M/C	I
0422 Georgetown Ranch	I	I	M	I	I	M	I	C	C
0423 Duckcreek	C	M	M/C	M/C	M	M	M	M/C	M
0424 Gilford Meadows	C	M	M/C	M/C	M	M	C	M	M
0426 Cherry Creek ADP (No. Steptoe Trail)	I	I	M	I	M/C	C	I	I	C
0427 Copper Flat	I	M	M	M	M	M	M	I	M
Gleason Creek	M	M	M	M	M	M	M	C	M
0433 West Schell Bench	M	M	M	M	M	M	M	C	M
0501 Medicine Butte	I	I	M	M	M	M	I	C	I
0502 No. Butte	I	I	M/C	I	I	I	I	M/C	I

Appendix 3

Categorization of Allotments

Allotment	Production Potential	Current Production	Resource Conflicts	Management Practices	Forage Values	Range Trend	Invest. Return	Social Controversy	Final Designation
0503 Thirty Mile Spring	I	I	M	M	M	C	M	M	I
0504 So. Butte	I	I	M	M	M	C	M	M	M
0505 McDermitt	C	M	M/C	M	M	M	M	M/C	M
0506 So. Butte Seeding	C	M	M/C	M/C	M/C	M/C	M	M/C	M
0507 Butte Seeding	C	M	M/C	M/C	M	M	M	M/C	M
0601 Railroad Pass	I/M	I	I	I	I	I	I/M	I	I
0602 W P Seeding	I/M	I	M	M	I	M/I	I/M	M	M
0603 Cold Creek	M	I/M	I	M	M/I	M	M/I	M	I
0605 Ft. Ruby	M/I	I	M	M	I	M	M	M/I	M

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Categorization of Allotments

Allotment	Production Potential	Current Production	Resource Conflicts	Management Practices	Forage Values	Range Trend	Invest. Return	Social Controversy	Final Designation
0606 Warm Springs	I	I	I	I	I	I	I	I	I
0607 Strawberry	I/M	I	M	I/M	I	I	I/M	M	M
0608 Newark	I/C	I/M	I	M	M/I	M	M/C	M	I
0609 Dry Mountain	M/I	M/I	M	M	I	I	C/M	M	M
0610 Sabala Springs	M	M/I	M	M	I/M	M	C	M	M
0612 North Pancake	I/C	I	M/I	M	I/M	M	I	M	M
0613 Six Mile	M	M/I	M/I	M	M/I	M	I/C	M	M
0614 Monte Cristo	M	M	M	M	M	I	M	I	I
0615 South Pancake	M	I	M	M	I	M	M/C	M	M

Appendix 3

Categorization of Allotments

Allotment	Production Potential	Current Production	Resource Conflicts	Management Practices	Forage Values	Range Trend	Invest. Return	Social Controversy	Final Designation
0617 Black Point	I	I	M/C	I	I	I	M/C	M/C	C
0619 Ruby Valley	M	I	I	I/M	I	I/M	M/C	I/M	I
0620 Horse Haven	I	M/I	I	M	M/I	I/M	I/C	M	I
0621 Maverick Springs	M	I	I	I	I	M/I/C	M/C	M	I
0622 Warm Springs Trail	I	I	M	I	I	I	I	I	M
0623 Silverado	C	I	C	C	I	C	M/C	C	C
0701 Duckwater	I	I	I	I	I	I	I	I	I
0802 Moorman Ranch	I	I	M/I	M/I	M/I	M	I/M	I	I
0803 Tom Plain	I	I	M	M	I	M	I	C	C
0804 Indian Jake	I	I	I	I	I	I	I	C	I
0805 McQueen Flat	M	M	M	M	M	M	M	M	M

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Appendix 3

Categorization of Allotments

Allotment	Production Potential	Current Production	Resource Conflicts	Management Practices	Forage Values	Range Trend	Invest. Return	Social Controversy	Final Designation
0806 Preston	M	I	M	I	I	M	I	C	C
0807 Sawmill Bench	M	M	M	M	M	M	M	C	M
0808 Rock Canyon	I	I	M	I	I	M	I	C	C
0810 Douglas Point	I	I	C	C	C	I	M	I	I
0811 Douglas Canyon	C	C	C	C	C	C	C	C	C
0812 Big Six Well	C	C	M	C	C	C	C	C	C
0814 Six Mile Ranch	M	M	M	M	M	M	M	C	M
0815 Dee Gee Spring	I	I	M	I	I	C	I	C	C
0816 North Cove	M	I	I	I	I	I	I	I	I
0817 Cove	M	I	M	I	M	I	C	C	M
0818 Sorenson Well	C	C	C	C	C	C	C	C	C

Appendix 3

Categorization of Allotments

Allotment	Production Potential	Current Production	Resource Conflicts	Management Practices	Forage Values	Range Trend	Invest. Return	Social Controversy	Final Designation
0819 Wells Station	M	I	M	I	I	I	I	C	I
0821 Jakes Unit Trail	C	I	I	I	I	I	I	I	M
0822 Preston Lund Trail	C	I	M	I	I	I	I	I	M
0823 Badger Spring	I	I	M/C	M/C	M	M	I	M/C	I
0824 Willow Springs Seeding	M	M	M	M	M	M	M	C	M
0825 Willow Springs Addition	M	M	M	M	M	M	M	C	M
0826 Giroux Wash	M	M	M	M	M	I	I	C	I
0827 Dark Peak	I	I	M	I	M	I	I	C	I
0828 Maybe Seeding	M	M	M	M	M	M	M	M	M
0829 Sheep Trail Seeding	M	M	M	M	M	M	M	C	M
0830 East Wells	C	C	C	C	C	C	C	C	C

Appendix 3

Categorization of Allotments

Allotment	Production Potential	Current Production	Resource Conflicts	Management Practices	Forage Values	Range Trend	Invest. Return	Social Controversy	Final Designation
0831 Brown Knoll	I/M	I	M	M	M	I	I/M	C	I
0832 Swamp Cedar	M	M	M	M	M	M	M	C	M
0901 Tamberline	C	M/C	M	M	M	M	M	M/C	M
0902 White Rock	M	I	M	I	I	I	I	C	I
0903 Cattle Camp/Cave Lake	I	I	I	I	I	I	I	C	I
0904 Cave Valley Ranch	I	I	M	M	M	I	M	C	I
0905 Sheep Pass	I	I	M	M	M	I	I	C	I
0906 Shingle Pass	I	I	M	M	I	I	I	M	M
0907 Haggerty Wash	M	M	M	M	M	M	M	C	M
0908 Cave Valley Seeding	M	M	M	M	M	M	C	C	M
0909 Cold Spring	C	M	M	M	M	M	M	M	M

EGAN RESOURCE MANAGEMENT PLAN

Appendix 3

Categorization of Allotments

Allotment	Production Potential	Current Production	Resource Conflicts	Management Practices	Forage Values	Range Trend	Invest. Return	Social Controversy	Final Designation
0910 Lake Area	I	I	M	M	M	I	I	I	I
0913 Little White Rock	M	M	M	M	M	I	M	C	M
0914 Chimney Rock	M	M	M	M	M	I	M	M	M

EGAN RESOURCE MANAGEMENT PLAN

Appendix 4

Vegetation Type Acreages By Zone

* Includes Private Land

	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Total Acres by Veg. Type
Aspen	5,236	2,759	3,558	-	-	11,553
Meadow	15,433	14,600	9,598	176	2,610	42,417
Flood Plain/Basin Wildrye	14,373	-	63,397	-	9,828	87,598
Salt Desert-Shadscale	70,779	457,607	17,212	20,127	59,038	624,763
Salt Desert-Greasewood	18,214	8,688	50,047	-	-	76,949
Northern Desert Shrub Big/Black Sagebrush	332,823	448,062	386,089	26,822	110,624	1,304,420
Woodland - Pinyon & Juniper	262,251	650,156	328,607	94,345	91,257	1,426,616
Mountain Brush - Mountain Mahogany	12,986	24,648	40,808	2,259	-	80,701
Mixed Conifer/Bristlecone Pine	3,142	23,681	20,012	-	-	46,835
Playa	11,447	1,294	-	-	-	12,741
Crested Wheatgrass	26,944	19,653	52,649	9,411	12,761	121,418
Salt Desert-Winterfat	104,648	85,842	-	-	41,524	232,014
Total Acres by Zone	878,276	1,736,990	971,977	153,140	327,642	4,068,025

Appendix 5

Existing and Desired Successional Vegetation Stages by Type and Management Zone

The narrative below describes the use of the charts which follow. The chart on the next page for the Aspen Vegetation Type will be used as the example for how this appendix is to be used.

Within Zone 1, the aspen vegetation type presently consists (existing situation) of the following: 5% in perennial grasses/forbs and aspen suckers; and 70% in perennial grasses/forbs, aspen trees and young conifers. The remaining 25% of this vegetation type consists of mature aspen trees with scattered conifers.

Management direction for Zone 1 under the B alternative will be to move the successional stage of the Aspen Vegetation Type to: 20% of the vegetation in perennial grasses/forbs and aspen suckers; 50% aspen trees along with perennial grasses/forbs, and young conifers; and 30% as mature aspen trees with scattered conifers. Increasing the percentage of perennial grasses/forbs and aspen suckers will benefit all range users. Increasing the percentage of mature aspen trees will benefit tree nesting raptors, mule deer, elk, blue grouse and non game species.

On the other hand, the management direction for the D alternative in Zone 1 of the Aspen Vegetation Type would be directed toward an early successional stage to produce more livestock forage. Under this alternative 25% of the vegetation would be in perennial grasses/forbs. The remaining 75% would be in perennial grasses/forbs and aspen suckers.

Alternative C is a compromise alternative between alternatives B and D. Alternative C also proposes the same management actions for vegetation as the Preferred Alternative. (As a result there is no seperate line for the Preferred Alternatives in the following charts). Under this alternative the management direction will be achieve a vegetation mixture of: 60% in perennial grasses/forbs and aspen suckers; 25% in perennial grasses/forbs, aspen and young conifers; the remaining 15% would be mature aspen with scattered conifers. This alternative would benefit both livestock and wildlife.

Alternative A represents a continuation of current management practices. Under this alternative desired successional stages have not been proposed. As a result all entries under this alternative appear as a dashed line.

Appendix 5

Existing and Desired Successional Stages by Vegetation Type and Management Zone

APPENDIX 5

ASPEN

Successional Stages	Zone 1							Zone 2							Zone 3							Zone 4							Zone 5						
	Desired Management Levels by Alternative (% of acres by zone)							Desired Management Levels by Alternative (% of acres by zone)							Desired Management Levels by Alternative (% of acres by zone)							Desired Management Levels by Alternative (% of acres by zone)							Desired Management Levels by Alternative (% of acres by zone)						
	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E
Annuals	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0
Perennial grasses/Forbs	0	0	-	0	0	25	0	0	20	-	0	20	25	0	0	10	-	0	10	25	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0
Perennial grasses/Forbs/ Aspen suckers	5	60	-	20	60	75	20	25	50	-	25	50	75	25	10	40	-	25	40	75	25	0	0	-	0	0	0	0	0	0	-	0	0	0	0
Perennial grasses/Forbs/ Aspen/Young conifers	70	25	-	50	25	0	50	60	15	-	60	15	0	60	75	40	-	60	40	0	60	0	0	-	0	0	0	0	0	0	-	0	0	0	0
Aspen trees/Conifers	15	5	-	20	5	0	20	10	10	-	10	10	0	10	5	5	-	10	5	0	10	0	0	-	0	0	0	0	0	0	-	0	0	0	0
Aspen trees	10	10	-	10	10	0	10	5	5	-	5	5	0	5	10	5	-	5	5	0	5	0	0	-	0	0	0	0	0	0	-	0	0	0	0

* Existing Situation

** Preferred Alternative

EGAN RESOURCE MANAGEMENT PLAN

Appendix 5

Existing and Desired Successional Stages by Vegetation Type and Management Zone

MEADOW

Successional Stages	Zone 1							Zone 2							Zone 3							Zone 4							Zone 5						
	Desired Management Levels by Alternative (% of acres by zone)							Desired Management Levels by Alternative (% of acres by zone)							Desired Management Levels by Alternative (% of acres by zone)							Desired Management Levels by Alternative (% of acres by zone)							Desired Management Levels by Alternative (% of acres by zone)						
	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E
Annuals	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	5	0	-	0	0	0	0	0	0	-	0	0	0	0
Perennial grasses/Forbs	10	90	-	80	90	90	80	10	90	-	70	90	90	70	15	90	-	70	90	90	70	20	80	-	75	80	80	75	20	90	-	70	90	80	70
Perennial grasses/Forbs/ Young shrubs	20	5	-	5	5	10	5	20	5	-	15	5	10	15	70	10	-	15	10	10	15	50	20	-	15	20	15	15	75	5	-	15	5	5	15
Perennial grasses/Forbs/ Mature shrubs	70	5	-	15	5	0	15	70	5	-	15	5	0	15	15	0	-	15	0	0	15	25	0	-	10	0	5	10	5	5	-	15	5	15	15

* Existing Situation
** Preferred Alternative

Appendix 5

Existing and Desired Successional Stages by Vegetation Type and Management Zone

FLOODPLAIN/BASIN WILDRYE, ALKALI SACATON, INLAND SALTGRASSES

Successional Stages	Zone 1 Desired Management Levels by Alternative (% of acres by zone)							Zone 2 Desired Management Levels by Alternative (% of acres by zone)							Zone 3 Desired Management Levels by Alternative (% of acres by zone)							Zone 4 Desired Management Levels by Alternative (% of acres by zone)							Zone 5 Desired Management Levels by Alternative (% of acres by zone)						
	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E
Annuals	0	5	-	10	5	0	10	0	5	-	10	5	0	10	0	5	-	5	5	0	5	0	0	-	0	0	0	0	0	0	-	5	0	0	5
Perennial grasses/Forbs	5	65	-	60	65	75	60	5	65	-	60	65	75	60	40	65	-	60	65	75	60	0	0	-	0	0	0	0	20	65	-	40	65	85	40
Perennial grasses/Forbs/ Young shrubs	5	25	-	25	25	20	25	5	25	-	25	25	20	25	50	25	-	30	25	20	30	0	0	-	0	0	0	0	40	30	-	50	30	15	50
Perennial grasses/Forbs/ Mature shrubs	90	5	-	5	5	5	5	90	5	-	5	5	5	5	10	5	-	5	5	5	5	0	0	-	0	0	0	0	40	5	-	5	5	0	5

* Existing Situation
** Preferred Alternative

EGAN RESOURCE MANAGEMENT PLAN

Appendix 5

Existing and Desired Successional Stages by Vegetation Type and Management Zone

SALT DESERT AND DESERT SHRUB/SHADSCALE

Successional Stages	Zone 1							Zone 2							Zone 3							Zone 4							Zone 5						
	Desired Management Levels by Alternative (% of acres by zone)							Desired Management Levels by Alternative (% of acres by zone)							Desired Management Levels by Alternative (% of acres by zone)							Desired Management Levels by Alternative (% of acres by zone)							Desired Management Levels by Alternative (% of acres by zone)						
	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E
Annuals	15	0	-	0	0	0	0	30	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	5	0	-	0	0	0	0
Perennial grasses/Forbs	5	40	-	35	40	15	35	0	40	-	50	40	25	50	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	20	-	15	20	20	15
Perennial grasses/Forbs/ Young shrubs/Young shadscale	20	50	-	60	50	80	60	10	40	-	25	40	70	25	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	50	-	60	50	70	60
Perennial grasses/Forbs/ Mature shrubs & shadscale	60	10	-	5	10	5	5	60	20	-	25	20	5	25	0	0	-	0	0	0	0	0	0	-	0	0	0	0	95	30	-	25	30	10	25

* Existing Situation
** Preferred Alternative

Appendix 5

Existing and Desired Successional Stages by Vegetation Type and Management Zone

SALT DESERT AND DESERT SHRUB/BLACK GREASEWOOD

Successional Stages	Zone 1 Desired Management Levels by Alternative (% of acres by zone)							Zone 2 Desired Management Levels by Alternative (% of acres by zone)							Zone 3 Desired Management Levels by Alternative (% of acres by zone)							Zone 4 Desired Management Levels by Alternative (% of acres by zone)							Zone 5 Desired Management Levels by Alternative (% of acres by zone)						
	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E
Annuals	5	0	-	0	0	0	0	5	0	-	0	0	0	0	5	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0
Perennial grasses/Forbs	0	40	-	50	40	25	50	0	40	-	50	40	25	50	0	40	-	50	40	25	50	0	0	-	0	0	0	0	0	0	-	0	0	0	0
Perennial grasses/Forbs/ Young shrubs/Greasewood	25	45	-	40	45	50	40	0	45	-	45	45	50	45	0	45	-	45	45	50	45	0	0	-	0	0	0	0	0	0	-	0	0	0	0
Perennial grasses/Forbs/ Mature shrubs & greasewood	70	15	-	10	15	25	10	95	15	-	5	15	25	5	95	15	-	5	15	25	5	0	0	-	0	0	0	0	0	0	-	0	0	0	0

* Existing Situation
** Preferred Alternative

Appendix 5

Existing and Desired Successional Stages by Vegetation Type and Management Zone

NORTHERN DESERT SHRUB/SAGEBRUSH

Successional Stages	Zone 1 Desired Management Levels by Alternative (% of acres by zone)							Zone 2 Desired Management Levels by Alternative (% of acres by zone)							Zone 3 Desired Management Levels by Alternative (% of acres by zone)							Zone 4 Desired Management Levels by Alternative (% of acres by zone)							Zone 5 Desired Management Levels by Alternative (% of acres by zone)						
	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E
Annuals	5	0	-	0	0	0	0	10	0	-	0	0	0	0	0	0	-	0	0	0	0	5	0	-	0	0	0	0	30	0	-	0	0	0	0
Perennial grasses/Forbs	15	40	-	15	40	50	15	5	40	-	15	40	50	15	5	40	-	15	40	50	15	5	40	-	15	40	50	15	10	40	-	15	40	50	15
Perennial grasses/Forbs/ Young shrubs	20	40	-	60	40	30	60	30	40	-	60	40	30	60	15	40	-	60	40	30	60	30	40	-	60	40	30	60	10	40	-	60	40	30	60
Perennial grasses/Forbs/ Mature big sage and black sage	60	20	-	25	20	20	25	55	20	-	25	20	20	25	80	20	-	25	20	20	25	60	20	-	25	20	20	25	50	20	-	25	20	20	25

* Existing Situation
** Preferred Alternative

Appendix 5

Existing and Desired Successional Stages by Vegetation Type and Management Zone

WOODLAND/PINYON-JUNIPER

Successional Stages	Zone 1							Zone 2							Zone 3							Zone 4							Zone 5						
			Desired Management Levels by Alternative (% of acres by zone)							Desired Management Levels by Alternative (% of acres by zone)							Desired Management Levels by Alternative (% of acres by zone)							Desired Management Levels by Alternative (% of acres by zone)							Desired Management Levels by Alternative (% of acres by zone)				
	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E
Annuals	10	0	-	0	0	5	0	0	0	-	0	0	5	0	0	0	-	0	0	5	0	0	0	-	0	0	5	0	0	0	-	0	0	5	0
Perennial grasses and forbs	10	10	-	10	10	15	10	0	15	-	15	15	15	15	0	15	-	5	15	15	5	0	15	-	5	15	15	5	0	15	-	5	15	15	5
Perennial grasses, forbs and shrubs	10	30	-	20	30	30	20	0	30	-	15	30	40	15	5	30	-	15	30	35	15	0	30	-	15	30	40	15	0	30	-	15	30	40	15
Perennial grasses, forbs, shrubs, and young pinyon-juniper	5	40	-	40	40	20	40	5	35	-	40	35	20	40	15	35	-	45	35	20	45	10	40	-	50	40	20	50	20	35	-	45	35	20	45
Perennial grasses, forbs, shrubs, and mature juniper/pinyon	15	5	-	10	5	10	10	30	5	-	15	5	10	15	75	5	-	20	5	10	20	50	5	-	20	5	10	20	30	5	-	20	5	10	20
Mature juniper/pinyon (closed canopy)	50	15	-	20	15	20	20	65	15	-	15	15	10	15	5	15	-	15	15	15	15	40	10	-	10	10	10	10	50	15	-	15	15	10	15

* Existing Situation
** Preferred Alternative

EGAN RESOURCE MANAGEMENT PLAN

Appendix 5

Existing and Desired Successional Stages by Vegetation Type and Management Zone

MOUNTAIN BRUSH/MOUNTAIN MAHOGANY

Successional Stages	Zone 1							Zone 2							Zone 3							Zone 4							Zone 5						
			Desired Management Levels by Alternative (% of acres by zone)							Desired Management Levels by Alternative (% of acres by zone)							Desired Management Levels by Alternative (% of acres by zone)							Desired Management Levels by Alternative (% of acres by zone)							Desired Management Levels by Alternative (% of acres by zone)				
	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E
Annuals	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0
Perennial grasses/Forbs	0	15	-	5	15	20	5	0	15	-	5	15	20	5	0	15	-	5	15	20	5	0	0	-	0	0	0	0	0	0	-	0	0	0	0
Perennial grasses/Forbs/ Young shrubs	10	50	-	50	50	50	50	10	50	-	50	50	50	50	5	50	-	50	50	50	50	0	0	-	0	0	0	0	0	0	-	0	0	0	0
Perennial grasses/Forbs/ Shrubs/Young mahogany	25	25	-	35	25	20	35	25	25	-	35	25	20	35	25	25	-	35	25	20	35	0	0	-	0	0	0	0	0	0	-	0	0	0	0
Mature shrubs/Mature mahogany	60	10	-	5	10	10	5	60	10	-	5	10	10	5	50	10	-	5	10	10	5	0	0	-	0	0	0	0	0	0	-	0	0	0	0
Mahogany	5	0	-	5	0	0	5	5	0	-	5	0	0	5	20	0	-	5	0	0	5	0	0	-	0	0	0	0	0	0	-	0	0	0	0

* Existing Situation
** Preferred Alternative

Appendix 5

Existing and Desired Successional Stages by Vegetation Type and Management Zone

MIXED CONIFER FOREST/BRISTLECONE PINE

Successional Stages	Zone 1							Zone 2							Zone 3							Zone 4							Zone 5						
	Desired Management Levels by Alternative (% of acres by zone)							Desired Management Levels by Alternative (% of acres by zone)							Desired Management Levels by Alternative (% of acres by zone)							Desired Management Levels by Alternative (% of acres by zone)							Desired Management Levels by Alternative (% of acres by zone)						
	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E
Annuals	0	0	-	0	0	0	0	0	0	-	0	0	0	0	5	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0
Perennial grasses/Forbs	0	0	-	0	0	0	0	0	10	-	10	10	5	10	5	0	-	10	10	5	10	0	0	-	0	0	0	0	0	0	-	0	0	0	0
Perennial grasses/Forbs/ Young aspen, conirer & pine	0	0	-	0	0	0	0	10	80	-	50	80	95	50	75	80	-	50	80	95	50	0	0	-	0	0	0	0	0	0	-	0	0	0	0
Mature aspen, conifer & pine	0	0	-	0	0	0	0	85	10	-	30	10	0	30	5	10	-	30	10	0	30	0	0	-	0	0	0	0	0	0	-	0	0	0	0
Mature conifer and pine	0	0	-	0	0	0	0	5	0	-	10	0	0	10	10	0	-	10	0	0	10	0	0	-	0	0	0	0	0	0	-	0	0	0	0

* Existing Situation
** Preferred Alternative

Appendix 5

Existing and Desired Successional Stages by Vegetation Type and Management Zone

SALT DESERT AND DESERT SHRUB/WINTERFAT

Successional Stages	Zone 1							Zone 2							Zone 3							Zone 4							Zone 5						
	Desired Management Levels by Alternative (% of acres by zone)							Desired Management Levels by Alternative (% of acres by zone)							Desired Management Levels by Alternative (% of acres by zone)							Desired Management Levels by Alternative (% of acres by zone)							Desired Management Levels by Alternative (% of acres by zone)						
	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E	E.S.*	P**	A	B	C	D	E
Annuals	10	0	-	0	0	0	0	30	0	-	0	0	0	0	0	0	-	0	0	0	0	20	0	-	0	0	0	0	10	0	-	0	0	0	0
Perennial grasses/Forbs	10	40	-	50	40	10	50	15	20	-	50	20	0	50	0	0	-	0	0	0	0	0	30	-	50	30	0	50	0	20	-	50	20	0	50
Perennial grasses/Forbs/ Young winterfat	50	40	-	30	40	10	30	45	60	-	40	60	10	40	0	0	-	0	0	0	0	0	50	-	40	50	10	40	0	10	-	40	10	10	40
Perennial grasses/Forbs/ Mature winterfat	30	20	-	20	20	80	20	10	20	-	10	20	90	10	0	0	-	0	0	0	0	80	20	-	10	20	90	10	90	70	-	10	70	90	10

* Existing Situation
** Preferred Alternative

EGAN RESOURCE MANAGEMENT PLAN

Appendix 6

Sensitive Plants

Scientific Name	Common Name
Astragalus callithrix	callaway milkvetch
Astragalus uncialls	currant milkvetch
Castillefa salsuginosa	Monte Neva paintbrush
Coryphantha vivipara var. rosea	rose cushion coryphantha
Zigadenus vaginatus	sheathed deathcamas
Sphaeralcea caespitosa	Jones globe-mallow

Appendix 7

Stream, Riparian condition, Conflicts, BLM-administered Miles and Fish Species in Egan Resource Area Streams

Stream	Allotment	1981 Mi, Sp./Sum. BLM Administered Miles	Fish Species Occurrence	Habitat Condition Class	Acres of Riparian	Conflicts
Berry	Duck Creek - 0423	1.0	R.T. B.T.	3	1.0	Livestock grazing
Big Indian	Indian Creek - 0410	1.2	R.T. B.T.	2	1.0	Livestock grazing
Boneyard	Gilford Meadows - 0424	0.5	R.T. B.T.	2	.2	Livestock grazing
Bullwhack	Little White Rock - 0413	2.0	----------	4	.5	Livestock grazing, erosion
Cold	Cold Creek - 0603	.25	R.T. B.N.T.	1	.5	None
Connors	Cold Creek - 0603	9.0	----------	3	---	Livestock grazing
Crystal	Duckwater - 0701	3.0	----------	2	.4	Livestock grazing
Currant	Duckwater - 0701	2.0	B.T. R.T.	2	.05	Livestock grazing
Deadman	Warm Springs - 0606	0.5	----------	3	1.0	Livestock grazing
Douglas	Douglas Canyon - 0811	1.75	----------	3	---	Livestock grazing, large reservoir on private land
Duckcreek Basin	Duck Creek - 0423	1.0	S.D.?	3	14.0	Livestock grazing
Duckwater	Duckwater - 0701	1.0 (winter)	----------	---	---	--------------------
East	Duck Creek - 0423	1.5	B.T. R.T.	3	7.0	Livestock grazing
Egan	Cherry Creek - 0403	2.0	R.T. #	2	3.0	Livestock grazing
First	Second Creek - 0417	.75	#	1	.3	Livestock grazing
Fitzhugh	Second Creek - 0417	1.0	#	3	2.0	Livestock grazing, water held private land dry yrs.
Gilford	Gilford Meadows - 0424	1.0	----------	1	2.0	Livestock grazing
Gleason	Thirty Mile Spring - 0503	2.0	----------	2	5.0	Livestock grazing
Gold	Gold Canyon - 0413	2.2	----------	2	5.0	None at present
Goshute	Cherry Creek - 0403	7.0	U.C.T.	2	15.0	Livestock, siltation upper basin road
Haggerty	Shingle Pass - 0906	2.0		3	1.0	Livestock, erosion
Horse and cattle	Willow Spring - 0129	2.5		4	1.0	Livestock grazing
Huntington	Railroad Pass - 0601	.25	R.T.	1	.2	Livestock grazing

Appendix 7

Stream, Riparian condition, Conflicts, BLM-administered Miles and Fish Species in Egan Resource Area Streams

Stream	Allotment	1981 MI, Sp./Sum. BLM Administered Miles	Fish Species Occurrence	Habitat Condition Class	Acres of Riparian	Conflicts
Illipah	Moorman Ranch - 0802	3.2	R.T. B.T. B.N.T.	2	4.0	Livestock
Illipah unnamed	Moorman Ranch - 0802	2.0	----------	4	2.0	Livestock
Indian	Indian Creek - 0410	.25	#	2	.4	Livestock
McDonald	Gilford Meadows - 0424	.25	----------	3	1.0	-----------
Nine Mile	Cherry Creek - 0403	3.0	#	2	4.0	None at present
North	Duck Creek Basin - 0419	.5	R.T.	2	.03	None at present
Old Deadman	Warm Springs - 0606	2.5	----------	3	1.5	Livestock, wild horses
Paris	Medicine Butte - 0501	2.0	R.T. B.T.	2	12.0	Livestock
Pinto	Newark - 0608	1.0	R.T.	3	1.0	Livestock
Schell	Schellbourne - 0407	1.5	----------	3	1.0	Livestock
Second	Second Creek - 0417	3.0	#	3	0.0	Livestock
Snow	Medicine Butte - 0501	3.0	----------	3	.5	Livestock, ditched
Steptoe	Heusser Mountain - 0416	0.0	W.R.M.S.	4	0.0	Livestock
Tehema	Whiteman Creek - 0408	1.7	----------	3	.3	Livestock
Third	Second Creek - 0417	.5	#	1	0.0	None at present
Water Canyon	White Rock - 0902	7.0	B.T. ?	3	7.0	Livestock
Wtr Cnyn(Sadler)	Newark - 0608	2.5	#	---	15.0	-----------
Whiteman	Whiteman Creek - 0408	2.0	#	1	1.0	None at present
White River	Tom Plain - 0803	1.0	RT,BNT,BT,WRMS,WRSD	3	4.0	Livestock
Willow	Lake Area - 0910	1.5	R.T. B.T.	4	2.0	Livestock
Willow-Snowball	Duckwater - 0701	2.0 (Winter)	----------	2	4.0	Livestock
Williams	Lake Area - 0910	2.0	----------	2	.5	Livestock
Wilson-Mather	Bennett Creek - 0409	2.3	R.T. B.T.	2	4.0	Livestock, possible div. onto private land
Worthington	Duck Creek - 0423	1.0	R.T. B.T.	1	.5	None at present
Zips Cabin	North Steptoe - 0405	.75	----------	4	2.0	Livestock
Duck Creek	Cherry Creek - 0403	30.0 (Winter) 0.0 (Summer)	R.T. B.N.T.	4	4129.0	Livestock
Totals		88.9(Summer) 121.8(Winter)		4245.2		

Riparian Condition Classes for Streambanks and Shorelines.

1. Class I. Excellent - No negligible use/damage; well-rooted vegetation (primarily grasses, sedges, and forbs); sod intact; very little, if any, erosion from vegetation areas; less than 5% bare soil showing along shoreline.

2. Class II. Good - Some use/damage; vegetation generally well-rooted; sod mostly intact; soil showing in places (6% to 15% bare soil showing overall); some surface erosion evident.

3. Class III. Fair - use or damage close to sod; vegetation shallow-rooted; moderate surface erosion (16% to 25% bare soil showing overall).

4. Class IV. Poor - Heavy to severe use/damage; vegetation generally grazed down to the soil; considerable soil showing (over 25 percent) with sod damage serious; active surface erosion a serious problem.

W = Winter
D = Dry
S = Summer
R.T. = Rainbow trout
B.T. = Brook trout
B.N.T. - Brown trout
U.C.T. = Utah Cutthroat trout
S.D. = Steptoe Dace
W.R.M.S. = White River Mountain Sucker
W.R.S.D. = White River Speckled Dace
D.T.C. = Duckwater Tui Chub
# = Proposed Utah Cutthroat Introduction

EGAN RESOURCE MANAGEMENT PLAN

Appendix 8

Riparian Condition Rating For Streams

Class 1/	% Optimum Habitat
Excellent	70 ≥
Good 2/	60-69
Fair	50-59
Poor 3/	≥ 49

1. Class rating only for Ely District

2. Excellent and Good = Satisfactory Habitat Condition

3. Fair and Poor = Unsatisfactory Habitat Condition

Appendix 9

Stream Riparian Condition

ZONE 1
BUCK, BALD, DIAMONDS

STREAM	ALLOTMENT	RIPARIAN CONDITION
Cold	Cold Creek - 0603	Excellent
Connors	Cold Creek - 0603	Fair
Deadman	Warm Springs - 0606	Fair
Huntington	Railroad Pass - 0601	Excellent
Old Deadman	Warm Springs - 0606	Fair
Pinto	Newark - 0608	Fair

ZONE 2
DUCKWATER/BUTTES

STREAM	ALLOTMENT	RIPARIAN CONDITION
Crystal	Duckwater	Good
Currant	Duckwater	Good
Gleason	Thirty-Mile Spring	Good
Illipah	Moorman Ranch	Good
Illipah unnamed	Moorman Ranch	Poor
Paris	Medicine Butte	Good
Snow	Medicine Butte	Fair
Willow-Snowball	Duckwater	Good
Gold	Gold Canyon	Good

EGAN RESOURCE MANAGEMENT PLAN
Appendix 9 (Continued)
Stream Riparian Condition

ZONE 3
STEPTOE/HORSE & CATTLE CAMP

STREAM	ALLOTMENT	RIPARIAN CONDITION
Berry	Duck Creek	Fair
Big Indian	Indian Creek	Good
Boneyard	Gilford Meadows	Good
Bullwhack	Little White Rock	Poor
Egan	Cherry Creek	Good
First	Second Creek	Excellent
Fitzhugh	Second Creek	Fair
Gilford	Gilford Meadows	Excellent
Goshute	Cherry Creek	Good
Haggerty	Shingle Pass	Fair
Horse & Cattle	Willow Spring	Poor
Indian	Indian Creek	Good
McDonald	Gilford Meadows	Fair
Nine-Mile	Cherry Creek	Good
North	Duck Creek Basin	Good
Schell	Schellbourne	Fair
Second	Second Creek	Fair
Steptoe	Heusser Mountain	Poor
Tehema	Whiteman Creek	Fair
Third	Second Creek	Excellent
Water Canyon	Whiterock	Fair
Whiteman	Whiteman Creek	Excellent
Willow	Lake Area	Poor
Williams	Lake Area	Good
Wilson-Mattier	Bennett Creek	Good
Worthington	Duck Creek	Excellent
Zip's Cabin	North Steptoe	Poor
Duck Creek	Cherry Creek(Various)	Poor

ZONE 5

STREAM	ALLOTMENT	RIPARIAN CONDITION
Douglas	Douglas Canyon	Fair
White River	Tom Plain	Fair

Appendix 10

Costs and Returns for Cattle Operations

(Values are in $ per cow)

	Federal Grazing Summer Only	Federal Grazing Year-Round
SALES		
Steer Yearlings	207.06	
Heifer Yearlings	113.91	
Steer Calves		130.16
Heifer Calves		73.69
Cull Cows	60.75	49.34
Cull Bulls	6.15	7.64
Alfalfa Hay Sales	69.75	
Total Sales	457.62	260.83
PRODUCTION COSTS		
A. CASH COSTS		
Government Grazing Feeds	11.33	20.06
Raised Alfalfa Hay Sold	25.34	
Raised Alfalfa Hay Fed	58.86	6.70
Raised Grass Hay Fed	17.72	5.13
Hired Labor	8.99	18.01
Veterinary Expenses	2.64	1.84
Hired Trucking	.22	1.71
Marketing Commission	.72	.62
Fuel	4.00	9.43
Repairs and Maintenance	3.00	5.94
Accounting	2.38	1.43
Brand Inspection	.41	.30
Salt and Minerals	2.24	1.97
Fencing	3.78	1.73
Bull	20.17	25.21
Horses	1.55	1.55
Taxes	6.06	5.01
Dues	.81	.35
Other Cash Costs	11.78	5.85
Total Cash Costs	182.00	112.84

B. OTHER COSTS		
Family Labor	86.01	76.99
Depreciation	37.03	24.71
Interest on Brood Stock	74.75	74.75
Interest on Equipment and Buildings	5.00	3.24
Total Other Costs	202.79	179.69
Return Above Cash Costs	275.62	147.99
Return Above Cash Costs and Family Labor	189.61	71.00
Return to Total Investment[1]	152.58	46.29
Net Ranch Income[2]	238.59	123.28

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[1] Return to total investment equals sales (Gross Income) minus cash costs, depreciation, and family labor. No estimate is included for interest on land or for opportunity cost.

[2] Net ranch income is calculated by deducting cash costs and depreciation from sales (Gross Income). The remaining revenue (Net Ranch Income) is available to service long-term debts on land and capital, to provide an income to family labor, and to provide a return to risk and management.

Appendix 11

Costs and Return for Sheep Operations

	$/Ewe
SALES	
Wool	12.32
Lambs	40.04
Cull Ewes	6.49
Total Sales	58.85
PRODUCTION COSTS	
A. CASH COSTS	
Grazing Feeds	3.78
Hired Labor	12.00
Veterinary Expenses	.14
Fuel	3.30
Repair and Maintenance	1.07
Salt and Minerals	.30
Fencing	.85
Shearing	1.04
Accounting	.37
Horses	.12
Rams	2.75
Taxes	.71
Dues	.18
Other Cash Costs	.75
Total Cash Costs	27.36
B. OTHER COSTS	
Family Labor	8.00
Depreciation	3.21
Interest on Brood Stock	8.45
Interest on Equipment and Buildings	.41
Total Other Costs	20.07
Total Other Costs	20.07

EGAN RESOURCE MANAGEMENT PLAN
Appendix 11 (Continued)
Costs & Returns for Sheep Operations

Return Above Cash Costs	31.49
Return Above Cash Costs and Family Labor	23.49
Return to Total Investment	20.28
Net Ranch Income	28.28

Appendix 12

ESTIMATED VALUE OF LANDS PROPOSED FOR DISPOSAL ($)

Classification For Highest & Best Use (Judgement)	Per Acre Value (Judgement)	Preferred Alternative	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Residential	1,000	20,359,000		7,312,000	20,359,000	20,399,000	7,312,000
Commercial	1,500	1,260,000		0	1,260,000	1,260,000	0
Grazing	75	1,825,575		904,275	1,825,575	1,428,225	904,275
Alfalfa	150	5,976,150		2,325,000	5,976,150	8,530,200	2,325,000
Grass	100	91,300		71,200	91,300	91,300	71,200
Industrial	1,500	2,571,000		2,571,000	2,571,000	2,571,000	2,571,000
R & PP	0	0		0	0	0	0
Total		32,083,025	0	13,183,475	32,083,025	37,279,725	13,183,475
Estimated Assessed Valuation (35%)		11,229,059	0	4,614,216	11,229,059	13,047,904	4,614,216
Estimated Potential Tax Revenue (1)		261,884	0	107,613	261,884	304,303	107,613
Estimated Offset of BLM Payments In lieu of Taxes (2)		5,952	0	2,947	5,952	8,454	2,947

(1) Based on FY 1981 Tax Rate of 2.3322 per $100 of Assessed Valuation.

(2) BLM administers 4.4 million acres in White Pine County. Payments in lieu of taxes for 1981 amounted to $328,000: 328,000 - 4,400,000 = 0.0745 per acre.

Appendix 13

Successional Stages for the Preferred Alternative by Vegetation Type and Zone

ASPEN

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Perennial grasses/Forbs	0	0	0	0	20	0	0	5	0	0	0	0	0	0	0
Perennial grasses/Forbs/ Aspen suckers	5	60	20	25	50	30	10	40	20	0	0	0	0	0	0
Perennial grasses/Forbs/ Aspen/Small conifers	70	25	60	60	15	55	75	40	65	0	0	0	0	0	0
Aspen trees/Small conifers	15	5	10	10	10	10	5	10	5	0	0	0	0	0	0
Aspen trees	10	10	10	5	5	5	10	5	10	0	0	0	0	0	0

* Existing situation
** Desired management level
*** Anticipated levels through management action

EGAN RESOURCE MANAGEMENT PLAN

Appendix 13

Successional Stages for the Preferred Alternative by Vegetation Type and Zone

MEADOW

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	0	0	0	0	0	0	0	0	0	5	0	5	0	0	0
Perennial grasses/Forbs	10	90	25	10	90	20	15	90	30	20	80	25	20	90	40
Perennial grasses/Forbs/ Young shrubs	20	5	15	20	5	15	70	10	65	50	20	45	75	5	55
Perennial grasses/Forbs/ Mature shrubs	70	5	60	70	5	65	15	0	5	25	0	25	5	5	5

* Existing situation
** Desired management level
*** Anticipated levels through management action

Appendix 13

Successional Stages for the Preferred Alternative by Vegetation Type and Zone

FLOODPLAIN/BASIN WILDRYE, ALKALI SACATON, INLAND SALTGRASSES

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	0	5	0	0	5	0	0	5	0	0	0	0	0	0	0
Perennial grasses/Forbs	5	65	5	5	65	5	40	65	45	0	0	0	20	65	20
Perennial grasses/Forbs/ Young shrubs	5	25	10	5	25	10	50	25	50	0	0	0	40	30	40
Perennial grasses/Forbs/ Mature shrubs	90	5	85	90	5	85	10	5	5	0	0	0	40	5	40

* Existing situation
** Desired management level
*** Anticipated levels through management action

Appendix 13

Successional Stages for the Preferred Alternative by Vegetation Type and Zone

SALT DESERT AND DESERT SHRUB/SHADSCALE

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	15	0	15	30	0	30	0	0	0	0	0	0	5	0	5
Perennial grasses/Forbs	5	40	5	0	40	0	0	0	0	0	0	0	0	20	0
Perennial grasses/Forbs/ Young shrubs/Shadscale	20	50	20	10	40	10	0	0	0	0	0	0	0	50	0
Perennial grasses/Forbs/ Mature shadscale	60	10	60	60	20	60	0	0	0	0	0	0	95	30	95

* Existing situation
** Desired management level
*** Anticipated levels through management action

EGAN RESOURCE MANAGEMENT PLAN

Appendix 13

Successional Stages for the Preferred Alternative by Vegetation Type and Zone

SALT DESERT AND DESERT SHRUB/BLACK GREASEWOOD

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	5	0	5	5	0	5	5	0	5	0	0	0	0	0	0
Perennial grasses/Forbs	0	40	0	0	40	0	0	40	0	0	0	0	0	0	0
Perennial grasses/Forbs/ Young shrubs/Young greasewood	25	45	25	0	45	0	0	45	0	0	0	0	0	0	0
Perennial grasses/Forbs/ Mature shrubs/Mature greasewood	70	15	70	95	15	95	95	15	95	0	0	0	0	0	0

* Existing situation
** Desired management level
*** Anticipated levels through management action

EGAN RESOURCE MANAGEMENT PLAN

Appendix 13

Successional Stages for the Preferred Alternative by Vegetation Type and Zone

NORTHERN DESERT SHRUB/SAGEBRUSH

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	5	0	20	10	0	25	0	0	25	5	0	25	30	0	25
Perennial grasses/Forbs	15	40	30	5	40	30	5	40	30	5	40	30	10	40	30
Perennial grasses/Forbs/ Young sagebrush	20	40	25	30	40	30	15	40	30	30	40	30	10	40	30
Perennial grasses/Forbs/ Mature sagebrush	60	20	25	55	20	15	80	20	15	60	20	15	50	20	15

* Existing situation
** Desired management level
*** Anticipated levels through management action

EGAN RESOURCE MANAGEMENT PLAN

Appendix 13

Successional Stages for the Preferred Alternative by Vegetation Type and Zone

WOODLAND/PINYON-JUNIPER

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	10	0	15	0	0	10	0	0	5	0	0	5	0	0	5
Perennial grasses/Forbs	10	10	5	0	15	10	0	15	5	0	15	10	0	15	5
Perennial grasses/Forbs/ Shrubs	10	30	15	0	30	15	5	30	10	0	30	20	0	30	25
Perennial grasses/Forbs/ Shrubs/Young pinyon-juniper	5	50	15	5	35	10	15	35	20	10	40	20	20	35	15
Perennial grasses/Forbs/ Shrubs/Mature pinyon-juniper	15	5	5	30	5	5	75	5	45	50	5	40	30	5	25
Mature pinyon-juniper (closed canopy)	50	5	45	65	15	50	5	15	5	40	10	5	50	15	25

* Existing situation

** Desired management level

*** Anticipated levels through management action

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Appendix 13

Successional Stages for the Preferred Alternative by Vegetation Type and Zone

MOUNTAIN BRUSH/MOUNTAIN MAHOGANY

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Perennial grasses/Forbs	0	15	0	0	15	0	0	15	0	0	0	0	0	0	0
Perennial grasses/Forbs/ Young shrubs	10	50	10	10	50	10	5	50	5	0	0	0	0	0	0
Perennial grasses/Forbs/ Shrubs/Young mahogany	25	25	25	25	25	25	25	25	25	0	0	0	0	0	0
Mature shrubs/Mature mahogany	60	10	60	60	10	60	50	10	50	0	0	0	0	0	0
Mature mahogany (closed canopy)	5	0	5	5	0	5	20	0	20	0	0	0	0	0	0

* Existing situation
** Desired management level
*** Anticipated levels through management action

Appendix 13

Successional Stages for the Preferred Alternative by Vegetation Type and Zone

MIXED CONIFER FOREST/BRISTLECONE PINE

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	0	0	0	0	0	0	5	0	5	0	0	0	0	0	0
Perennial grasses/Forbs	0	0	0	0	10	0	5	10	5	0	0	0	0	0	0
Perennial grasses/Forbs/ Young aspen, conifer, pine	0	0	0	10	80	10	75	80	75	0	0	0	0	0	0
Mature conifer, aspen & pine	0	0	0	85	10	85	5	10	5	0	0	0	0	0	0
Mature conifer & pine	0	0	0	5	0	5	10	0	10	0	0	0	0	0	0

* Existing situation
** Desired management level
*** Anticipated levels through management action

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Appendix 13

Successional Stages for the Preferred Alternative by Vegetation Type and Zone

SALT DESERT AND DESERT SHRUB/WINTERFAT

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	10	0	10	30	0	30	0	0	0	20	0	20	10	0	10
Perennial grasses/Forbs	10	40	10	15	20	15	0	0	0	0	30	0	0	20	0
Perennial grasses/Forbs/ Young winterfat	50	40	50	45	60	45	0	0	0	0	50	0	0	10	0
Perennial grasses/Forbs/ Mature winterfat	30	20	30	10	20	10	0	0	0	80	20	80	90	70	90

* Existing situation
** Desired management level
*** Anticipated levels through management action

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Appendix 14

Successional Stages for Alternative B by Vegetation Type and Zone

ASPEN

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Perennial grasses/Forbs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Perennial grasses/Forbs/ Aspen suckers	5	20	10	25	25	25	10	25	15	0	0	0	0	0	0
Perennial grasses/Trees/ Forbs/Aspen/Small conifers	70	50	65	60	60	60	75	60	70	0	0	0	0	0	0
Aspen Trees/Conifers	15	20	15	10	10	10	5	10	5	0	0	0	0	0	0
Aspen Trees	10	10	10	5	5	5	10	5	10	0	0	0	0	0	0

* Existing situation
** Desired management level
*** Anticipated levels through management action

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Appendix 14

Successional Stages for Alternative B by Vegetation Type and Zone

MEADOW

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	0	0	5	0	0	5	0	0	5	5	0	0	0	0	5
Perennial grasses/Forbs	10	80	20	10	70	15	15	70	25	20	75	55	20	70	50
Perennial grasses/Forbs/ Young shrubs	20	5	15	20	15	20	70	15	55	50	15	20	75	15	35
Perennial grasses/Forbs/ Mature shrubs	70	15	60	70	15	60	15	15	15	25	10	15	5	15	10

* Existing situation
** Desired management level
*** Anticipated levels through management action

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Appendix 14

Successional Stages for Alternative B by Vegetation Type and Zone

FLOODPLAIN/BASIN WILDRYE, ALKALI SACATON, INLAND SALTGRASS

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	0	10	5	0	10	5	0	5	0	0	0	0	0	5	0
Perennial grasses/Forbs	5	60	5	5	60	10	40	60	50	0	0	0	20	40	20
Perennial grasses/Forbs/ Young shrubs	5	25	10	5	25	15	50	30	40	0	0	0	40	50	40
Perennial grasses/Forbs/ Mature shrubs	90	5	80	90	5	70	10	5	10	0	0	0	40	5	40

* Existing situation

** Desired management level

*** Anticipated levels through management action

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Appendix 14

Successional Stages for Alternative B by Vegetation Type and Zone

SALT DESERT AND DESERT SHRUB/SHADSCALE

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	15	0	10	30	0	20	0	0	0	0	0	0	5	0	0
Perennial grasses/Forbs	5	35	10	0	50	10	0	0	0	0	0	0	0	15	5
Perennial grasses/Forbs/ Young shrubs/Shadscale	20	60	25	10	25	25	0	0	0	0	0	0	0	60	10
Perennial grasses/Forbs/ Mature shadscale	60	5	55	60	25	45	0	0	0	0	0	0	95	25	85

* Existing situation
** Desired management level
*** Anticipated levels through management action

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Successional Stages for Alternative B by Vegetation Type and Zone

SALT DESERT AND DESERT SHRUB/BLACK GREASEWOOD

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	5	0	5	5	0	5	5	0	5	0	0	0	0	0	0
Perennial grasses/Forbs	0	50	10	0	50	10	0	50	10	0	0	0	0	0	0
Perennial grasses/Forbs/ Young shrubs/Young greasewood	25	40	25	0	45	10	0	45	10	0	0	0	0	0	0
Perennial grasses/Forbs/ Mature shrubs/Mature greasewood	70	10	60	95	5	75	95	5	75	0	0	0	0	0	0

* Existing situation
** Desired management level
*** Anticipated levels through management action

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Successional Stages for Alternative B by Vegetation Type and Zone

NORTHERN DESERT SHRUB/SAGEBRUSH

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	5	0	5	10	0	10	0	0	0	5	0	5	30	0	25
Perennial grasses/Forbs	15	15	20	5	15	10	5	15	10	5	15	10	10	15	20
Perennial grasses/Forbs/ Young sagebrush	20	60	30	30	60	30	15	60	15	30	60	30	10	60	50
Perennial grasses/Forbs/ Mature sagebrush	60	25	45	55	25	45	80	25	70	60	25	50	50	25	5

* Existing situation
** Desired management level
*** Anticipated levels through management action

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Successional Stages for Alternative B by Vegetation Type and Zone

WOODLAND/PINYON-JUNIPER

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	10	0	5	0	0	5	0	0	5	0	0	5	0	0	5
Perennial grasses/Forbs	10	10	5	0	15	5	0	5	0	0	5	5	0	5	5
Perennial grasses/Forbs/ Shrubs	10	20	15	0	15	5	5	15	10	0	15	10	0	15	10
Perennial grasses/Forbs/ Shrubs/Young pinyon-juniper	5	40	25	5	40	15	15	45	25	10	50	10	20	45	20
Perennial grasses/Forbs/ Shrubs/Mature pinyon-juniper	15	10	15	30	15	15	75	20	50	50	20	35	30	20	20
Mature pinyon-juniper (closed canopy)	50	20	35	65	15	55	5	15	10	40	10	35	50	15	40

* Existing situation
** Desired management level
*** Anticipated levels through management action

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Successional Stages for Alternative B by Vegetation Type and Zone

MOUNTAIN BRUSH/MOUNTAIN MAHOGANY

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Perennial grasses/Forbs	0	5	5	0	5	0	0	5	0	0	0	0	0	0	0
Perennial grasses/Forbs/ Young shrubs	10	50	10	10	50	10	5	50	5	0	0	0	0	0	0
Perennial grasses/Forbs/ Shrubs/Young mahogany	25	35	20	25	35	25	25	35	25	0	0	0	0	0	0
Mature shrubs/Mature mahogany	60	5	60	60	5	60	50	5	50	0	0	0	0	0	0
Mature mahogany (closed canopy)	5	5	5	5	5	5	20	5	20	0	0	0	0	0	0

* Existing situation
** Desired management level
*** Anticipated levels through management action

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Appendix 14

Successional Stages for Alternative B by Vegetation Type and Zone

MIXED CONIFER FOREST/BRISTLECONE PINE

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	0	0	0	0	0	0	5	0	5	0	0	0	0	0	0
Perennial grasses/Forbs	0	0	0	0	10	0	5	10	5	0	0	0	0	0	0
Perennial grasses/Forbs/ Young aspen, conifer & pine	0	0	0	10	50	10	75	50	75	0	0	0	0	0	0
Mature conifer, aspen & pine	0	0	0	85	30	85	5	30	5	0	0	0	0	0	0
Mature conifer & pine	0	0	0	5	10	5	10	10	10	0	0	0	0	0	0

* Existing situation

** Desired management level

*** Anticipated levels through management action

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Appendix 14

Successional Stages for Alternative B by Vegetation Type and Zone

SALT DESERT AND DESERT SHRUB/WINTERFAT

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	10	0	5	30	0	20	0	0	0	20	0	10	10	0	5
Perennial grasses/Forbs	10	50	45	15	50	20	0	0	0	0	50	0	0	50	0
Perennial grasses/Forbs/ Young winterfat	50	30	35	45	40	40	0	0	0	0	40	0	0	40	10
Perennial grasses/Forbs/ Mature winterfat	30	20	15	10	10	20	0	0	0	80	10	90	90	10	85

* Existing situation
** Desired management level
*** Anticipated levels through management action

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Appendix 15

Successional Stages for Alternative C by Vegetation Type and Zone

ASPEN

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Perennial grasses/Forbs	0	0	0	0	20	0	0	10	0	0	0	0	0	0	0
Perennial grasses/Forbs/ Aspen suckers	5	60	20	25	50	30	10	40	20	0	0	0	0	0	0
Perennial grasses/Forbs/ Aspen/Small conifers	70	25	60	60	15	55	75	40	65	0	0	0	0	0	0
Aspen trees/Small conifers	15	5	15	10	10	10	5	5	5	0	0	0	0	0	0
Aspen trees	10	10	5	5	5	5	10	5	10	0	0	0	0	0	0

* Existing situation
** Desired management level
*** Anticipated levels through management action

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Appendix 15

Successional Stages for Alternative C by Vegetation Type and Zone

MEADOW

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	0	0	0	0	0	0	0	0	0	5	0	5	0	0	0
Perennial grasses/Forbs	10	90	25	10	90	20	15	90	30	20	80	25	20	90	40
Perennial grasses/Forbs/ Young shrubs	20	5	15	20	5	20	70	10	65	50	20	45	75	5	55
Perennial grasses/Forbs/ Mature shrubs	70	5	60	70	5	60	15	0	5	25	0	25	5	5	5

* Existing situation
** Desired management level
*** Anticipated levels through management action

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Appendix 15

Successional Stages for Alternative C by Vegetation Type and Zone

FLOODPLAIN/BASIN WILDRYE, ALKALI SACATON, INLAND SALTGRASSES

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	0	5	0	0	5	0	0	5	0	0	0	0	0	0	0
Perennial grasses/Forbs	5	65	5	5	65	5	40	65	40	0	0	0	20	65	20
Perennial grasses/Forbs/ Young shrubs	5	25	10	5	25	10	50	25	50	0	0	0	40	30	40
Perennial grasses/Forbs/ Mature shrubs	90	5	85	90	5	85	10	5	10	0	0	0	40	5	40

* Existing situation
** Desired management level
*** Anticipated levels through management action

Appendix 15

Successional Stages for Alternative C by Vegetation Type and Zone

SALT DESERT AND DESERT SHRUB/SHADSCALE

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	15	0	15	30	0	30	0	0	0	0	0	0	5	0	5
Perennial grasses/Forbs	5	40	5	0	40	0	0	0	0	0	0	0	0	20	0
Perennial grasses/Forbs/ Young shrubs/Shadscale	20	50	20	10	40	10	0	0	0	0	0	0	0	50	0
Perennial grasses/Forbs/ Mature shadscale	60	10	60	60	20	60	0	0	0	0	0	0	95	30	95

* Existing situation
** Desired management level
*** Anticipated levels through management action

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Appendix 15

Successional Stages for Alternative C by Vegetation Type and Zone

SALT DESERT AND DESERT SHRUB/BLACK GREASEWOOD

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	5	0	5	5	0	5	5	0	5	0	0	0	0	0	0
Perennial grasses/Forbs	0	40	0	0	40	0	0	40	0	0	0	0	0	0	0
Perennial grasses/Forbs Young shrubs/Young greasewood	25	45	25	0	45	0	0	45	0	0	0	0	0	0	0
Perennial grasses/Forbs/ Mature shrubs/Mature greasewood	70	15	70	95	15	95	95	15	95	0	0	0	0	0	0

* Existing situation
** Desired management level
*** Anticipated levels through management action

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Appendix 15

Successional Stages for Alternative C by Vegetation Type and Zone

NOTHERN DESERT SHRUB/SAGEBRUSH

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	5	0	25	10	0	25	0	0	25	5	0	25	30	0	25
Perennial grasses/Forbs	15	40	30	5	40	30	5	40	30	5	40	30	10	40	30
Perennial grasses/Forbs/ Young sagebrush	20	40	30	30	40	30	15	40	30	30	40	30	10	40	30
Perennial grasses/Forbs/ Mature sagebrush	60	20	15	55	20	15	80	20	15	60	20	15	50	20	15

* Existing situation
** Desired management level
*** Anticipated levels through management action

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Appendix 15

Successional Stages for Alternative C by Vegetation Type and Zone

WOODLAND/PINYON-JUNIPER

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	10	0	25	0	0	10	0	0	5	0	0	5	0	0	5
Perennial grasses/Forbs	10	10	25	0	15	10	0	15	5	0	15	10	0	15	5
Perennial grasses/Forbs/ Shrubs	10	30	15	0	30	15	5	30	10	0	30	20	0	30	25
Perennial grasses/Forbs/ Shrubs/Young pinyon-juniper	5	40	10	5	35	10	15	35	20	10	40	20	20	35	15
Perennial grasses/Forbs/ Shrubs/Mature pinyon-juniper	15	5	10	30	5	5	75	5	45	50	5	40	30	5	20
Mature pinyon-juniper (closed canopy)	50	15	15	65	15	50	5	15	5	40	10	5	50	15	80

* Existing situation
** Desired management level
*** Anticipated levels through management action

Appendix 15

Successional Stages for Alternative C by Vegetation Type and Zone

MOUNTAIN BRUSH/MOUNTAIN MAHOGANY

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Perennial grasses/Forbs	0	15	0	0	15	0	0	15	0	0	0	0	0	0	0
Perennial grasses/Forbs/ Young shrubs	10	50	10	10	50	10	5	50	5	0	0	0	0	0	0
Perennial grasses/Forbs/ Shrubs/Young mahogany	25	25	25	25	25	25	25	25	25	0	0	0	0	0	0
Mature shrubs/Mature mahogany	60	10	60	60	10	60	50	10	50	0	0	0	0	0	0
Mature mahogany (closed canopy)	5	0	5	5	0	5	20	0	20	0	0	0	0	0	0

* Existing situation
** Desired management level
*** Anticipated levels through management action

Appendix 15

Successional Stages for Alternative C by Vegetation Type and Zone

MIXED CONIFER FOREST/BRISTLECONE PINE

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	0	0	0	0	0	0	5	0	5	0	0	0	0	0	0
Perennial grasses/Forbs	0	0	0	0	10	0	5	10	5	0	0	0	0	0	0
Perennial grasses/Forbs/ Young aspen, conifer & pine	0	0	0	10	80	10	75	80	75	0	0	0	0	0	0
Mature conifer, aspen & pine	0	0	0	85	10	85	5	10	5	0	0	0	0	0	0
Mature conifer & pine	0	0	0	5	0	5	10	0	10	0	0	0	0	0	0

* Existing situation
** Desired management level
*** Anticipated levels through management action

Appendix 15

Successional Stages for Alternative C by Vegetation Type and Zone

SALT DESERT AND DESERT SHRUB/WINTERFAT

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	10	0	10	30	0	30	0	0	0	20	0	20	10	0	10
Perennial grasses/Forbs	10	40	10	15	20	15	0	0	0	0	30	0	0	20	0
Perennial grasses/Forbs/ Young winterfat	50	40	50	45	60	45	0	0	0	0	50	0	0	10	0
Perennial grasses/Forbs/ Mature winterfat	30	20	20	10	20	10	0	0	0	80	20	80	90	70	90

* Existing situation
** Desired management level
*** Anticipated levels through management action

EGAN RESOURCE MANAGEMENT PLAN

Appendix 16

Successional Stages for Alternative D by Vegetation Type and Zone

ASPEN

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.*	D.L.**	A.L.***	E.S.*	D.L.**	A.L.***	E.S.*	D.L.**	A.L.***	E.S.*	D.L.**	A.L.***
Annuals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Perennial grasses/Forbs	0	25	10	0	25	0	0	25	5	0	0	0	0	0	0
Perennial grasses/Forbs/ Aspen suckers	5	75	15	25	75	20	10	75	20	0	0	0	0	0	0
Perennial grasses/Forbs/ Aspen suckers/small conifers	70	0	5	60	0	60	75	0	55	0	0	0	0	0	0
Aspen trees/small conifers	15	0	60	10	0	10	5	0	10	0	0	0	0	0	0
Aspen trees	10	0	10	5	0	10	10	0	10	0	0	0	0	0	0

* Existing situation
** Desired management level
*** Anticipated levels through management action

EGAN RESOURCE MANAGEMENT PLAN

Appendix 16

Successional Stages for Alternative D by Vegetation Type and Zone

MEADOW

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	0	0	0	0	0	0	0	0	15	5	0	5	0	0	0
Perennial grasses/Forbs	10	90	5	10	90	5	15	90	5	20	80	10	20	80	15
Perennial grasses/Forbs/ Young shrubs	20	10	25	20	10	30	70	10	80	50	15	60	75	5	80
Perennial grasses/Forbs/ Mature shrubs	70	0	70	70	0	65	15	0	20	25	5	25	5	15	5

* Existing situation
** Desired management level
*** Anticipated levels through management action

EGAN RESOURCE MANAGEMENT PLAN

Appendix 16

Successional Stages for Alternative D by Vegetation Type and Zone

FLOODPLAIN/BASIN WILDRYE, ALKALI SACATON, INLAND SALTGRASSES

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Perennial grasses/Forbs	5	75	0	5	75	0	40	75	40	0	0	0	20	85	20
Perennial grasses/Forbs/ Young shrubs	5	20	5	5	20	5	50	20	50	0	0	0	40	15	40
Perennial grasses/Forbs/ Mature shrubs	90	5	95	90	5	95	10	5	10	0	0	0	40	0	40

* Existing situation
** Desired management level
*** Anticipated levels through management action

Appendix 16

Successional Stages for Alternative D by Vegetation Type and Zone

SALT DESERT AND DESERT SHRUB/SHADSCALE

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	15	0	15	30	0	30	0	0	0	0	0	0	5	0	5
Perennial grasses/Forbs	5	15	10	0	25	5	0	0	0	0	0	0	0	20	5
Perennial grasses/Forbs/ Young shrubs/Shadscale	20	80	20	10	70	10	0	0	0	0	0	0	0	70	0
Perennial grasses/Forbs/ Mature shadscale	60	5	45	60	5	55	0	0	0	0	0	0	95	10	90

* Existing situation
** Desired management level
*** Anticipated levels through management action

Appendix 16

Successional Stages for Alternative D by Vegetation Type and Zone

SALT DESERT AND DESERT SHRUB/BLACK GREASEWOOD

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	5	0	5	5	0	5	5	0	5	0	0	0	0	0	0
Perennial grasses/Forbs	0	25	0	0	25	0	0	25	0	0	0	0	0	0	0
Perennial grasses/Forbs/Young shrubs/Young greasewood	25	50	20	0	50	0	0	50	0	0	0	0	0	0	0
Perennial grasses/Forbs/Mature shrubs/Mature greasewood	70	25	75	95	25	95	95	25	95	0	0	0	0	0	0

* Existing situation
** Desired management level
*** Anticipated levels through management action

EGAN RESOURCE MANAGEMENT PLAN

Appendix 16

Successional Stages for Alternative D by Vegetation Type and Zone

NORTHERN DESERT SHRUB/SAGEBRUSH

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	5	0	5	10	0	10	0	0	0	5	0	5	30	0	30
Perennial grasses/Forbs	15	50	15	5	50	5	5	50	5	5	50	5	10	50	10
Perennial grasses/Forbs/ Young sagebrush	20	30	20	30	30	30	15	30	15	30	30	30	10	30	10
Perennial grasses/Forbs/ Mature sagebrush	60	20	60	55	20	55	80	20	80	60	20	60	50	20	50

* Existing situation
** Desired management level
*** Anticipated levels through management action

EGAN RESOURCE MANAGEMENT PLAN

Appendix 16

Successional Stages for Alternative D by Vegetation Type and Zone

WOODLAND/PINYON-JUNIPER

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	10	5	15	0	5	5	0	5	5	0	5	5	0	5	5
Perennial grasses/Forbs	10	15	15	0	15	5	0	15	5	0	15	5	0	15	5
Perennial grasses/Forbs/ Shrubs	10	30	15	0	40	5	5	35	5	0	40	5	0	40	5
Perennial grasses/Forbs/ Shrubs/Young pinyon-juniper	5	20	10	5	20	5	15	20	15	10	20	10	20	20	20
Perennial grasses/Forbs/ Shrubs/Mature pinyon-juniper	15	10	10	30	10	30	75	10	60	50	10	40	30	10	30
Mature pinyon-juniper (closed canopy)	50	20	35	65	10	50	5	15	10	40	10	35	50	10	35

* Existing situation

** Desired management level

*** Anticipated levels through management action

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Appendix 16

Successional Stages for Alternative D by Vegetation Type and Zone

MOUNTAIN BRUSH/MOUNTAIN MAHOGANY

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	0	0	5	0	0	0	0	0	5	0	0	0	0	0	0
Perennial grasses/Forbs	0	20	5	0	20	0	0	20	0	0	0	0	0	0	0
Perennial grasses/Forbs/ Young shrubs	10	50	5	10	50	0	5	50	0	0	0	0	0	0	0
Perennial grasses/Forbs/ Shrubs/Young mahogany	25	20	30	25	20	25	25	20	30	0	0	0	0	0	0
Mature shrubs/Mature mahogany	60	10	60	60	10	65	50	10	55	0	0	0	0	0	0
Mature mahogany (closed canopy)	5	0	5	5	0	10	20	0	10	0	0	0	0	0	0

* Existing situation
** Desired management level
*** Anticipated levels through management action

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Appendix 16

Successional Stages for Alternative D by Vegetation Type and Zone

MIXED CONIFER FOREST/BRISTLECONE PINE

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	0	0	0	0	0	0	5	0	5	0	0	0	0	0	0
Perennial grasses/Forbs	0	0	0	0	5	0	5	5	5	0	0	0	0	0	0
Perennial grasses/Forbs/ Young Aspen, Conifer & Pine	0	0	0	10	95	10	75	95	25	0	0	0	0	0	0
Mature Conifer, Aspen & Pine	0	0	0	85	0	85	5	0	5	0	0	0	0	0	0
Mature Conifer & Pine	0	0	0	5	0	5	10	0	10	0	0	0	0	0	0

* Existing situation
** Desired management level
*** Anticipated levels through management action

Appendix 16

Successional Stages for Alternative D by Vegetation Type and Zone

SALT DESERT AND DESERT SHRUB/WINTERFAT

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	10	0	20	30	0	35	0	0	0	20	0	20	10	0	15
Perennial grasses/Forbs	10	10	5	15	0	10	0	0	0	0	0	0	0	0	0
Perennial grasses/Forbs/ Young winterfat	50	10	10	45	10	45	0	0	0	0	10	10	0	10	0
Perennial grasses/Forbs/ Mature winterfat	30	80	65	10	90	10	0	0	0	80	90	80	90	90	85

* Existing situation
** Desired management level
*** Anticipated levels through management action

Appendix 17

Successional Stages for Alternative E by Vegetation Type and Zone

ASPEN

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Perennial grasses/Forbs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Perennial grasses/Forbs/ Aspen suckers	5	20	10	25	25	20	10	25	10	0	0	0	0	0	0
Perennial grasses/Trees/ Forbs/Aspen/Small conifers	70	50	50	60	60	60	75	60	60	0	0	0	0	0	0
Aspen Trees/Conifers	15	20	25	10	10	10	5	10	10	0	0	0	0	0	0
Aspen Trees	10	10	20	5	5	10	10	5	20	0	0	0	0	0	0

* Existing situation
** Desired management level
*** Anticipated levels through management action

EGAN RESOURCE MANAGEMENT PLAN

Appendix 17

Successional Stages for Alternative E by Vegetation Type and Zone

MEADOW

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0
Perennial grasses/Forbs	10	80	5	10	70	5	15	70	15	20	75	15	20	70	15
Perennial grasses/Forbs/ Young shrubs	20	5	15	20	15	15	70	15	20	50	15	20	75	15	20
Perennial grasses/Forbs/ Mature shrubs	70	15	80	70	15	80	15	15	65	25	10	65	5	15	65

* Existing situation
** Desired management level
*** Anticipated levels through management action

Appendix 17

Successional Stages for Alternative E by Vegetation Type and Zone

FLOODPLAIN/BASIN WILDRYE, ALKALI SACATON, INLAND SALTGRASS

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	0	10	0	0	10	0	0	5	0	0	0	0	0	5	0
Perennial grasses/Forbs	5	60	0	5	60	0	40	60	15	0	0	0	20	40	5
Perennial grasses/Forbs/ Young shrubs	5	25	5	5	25	5	50	30	25	0	0	0	40	50	15
Perennial grasses/Forbs/ Mature shrubs	90	5	95	90	5	95	10	5	60	0	0	0	40	5	80

* Existing situation
** Desired management level
*** Anticipated levels through management action

EGAN RESOURCE MANAGEMENT PLAN

Appendix 17

Successional Stages for Alternative E by Vegetation Type and Zone

SALT DESERT AND DESERT SHRUB/SHADSCALE

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	15	0	0	30	0	0	0	0	0	0	0	0	5	0	0
Perennial grasses/Forbs	5	35	5	0	50	10	0	0	0	0	0	0	0	15	0
Perennial grasses/Forbs/ Young shrubs/Shadscale	20	60	15	10	25	15	0	0	0	0	0	0	0	60	5
Perennial grasses/Forbs/ Mature shadscale	60	5	80	60	25	75	0	0	0	0	0	0	95	25	95

* Existing situation
** Desired management level
*** Anticipated levels through management action

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Appendix 17

Successional Stages for Alternative E by Vegetation Type and Zone

SALT DESERT AND DESERT SHRUB/BLACK GREASEWOOD

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	5	0	0	5	0	0	5	0	0	0	0	0	0	0	0
Perennial grasses/Forbs	0	50	5	0	50	0	0	50	0	0	0	0	0	0	0
Perennial grasses/Forbs/ Young shrubs/Young greasewood	25	40	10	0	45	5	0	45	5	0	0	0	0	0	0
Perennial grasses/Forbs/ Mature shrubs/Mature greasewood	70	10	85	95	5	95	95	5	95	0	0	0	0	0	0

* Existing situation
** Desired management level
*** Anticipated levels through management action

EGAN RESOURCE MANAGEMENT PLAN

Appendix 17

Successional Stages for Alternative E by Vegetation Type and Zone

NORTHERN DESERT SHRUB/SAGEBRUSH

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	5	0	0	10	0	0	0	0	0	5	0	0	30	0	0
Perennial grasses/Forbs	15	15	5	5	15	10	5	15	0	5	15	5	10	15	10
Perennial grasses/Forbs/ Young sagebrush	20	60	15	30	60	15	15	60	5	30	60	15	10	60	20
Perennial grasses/Forbs/ Mature sagebrush	60	25	80	55	25	75	80	25	95	60	25	80	50	25	70

* Existing situation
** Desired management level
*** Anticipated levels through management action

EGAN RESOURCE MANAGEMENT PLAN

Appendix 17

Successional Stages for Alternative E by Vegetation Type and Zone

WOODLAND/PINYON-JUNIPER

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Perennial grasses/Forbs	10	10	0	0	15	0	0	5	0	0	5	0	0	5	0
Perennial grasses/Forbs/ Shrubs	10	20	0	0	15	0	5	15	0	0	15	0	0	15	0
Perennial grasses/Forbs/ Shrubs/Young pinyon-juniper	5	40	5	5	40	0	15	45	5	10	50	5	20	45	5
Perennial grasses/Forbs/ Shrubs/Mature pinyon-juniper	15	10	5	30	15	5	75	20	5	50	20	5	30	20	5
Mature pinyon-juniper (closed canopy)	50	20	90	65	15	95	5	15	90	40	10	90	50	15	90

* Existing situation

** Desired management level

*** Anticipated levels through management action

EGAN RESOURCE MANAGEMENT PLAN

Appendix 17

Successional Stages for Alternative E by Vegetation Type and Zone

MOUNTAIN BRUSH/MOUNTAIN MAHOGANY

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Perennial grasses/Forbs	0	5	0	0	5	0	0	5	0	0	0	0	0	0	0
Perennial grasses/Forbs/ Young shrubs	10	50	0	10	50	0	5	50	0	0	0	0	0	0	0
Perennial grasses/Forbs/ Shrubs/Young mahogany	25	35	20	25	35	20	25	35	10	0	0	0	0	0	0
Mature shrubs/Mature mahogany	60	5	25	60	5	25	50	5	20	0	0	0	0	0	0
Mature mahogany (closed canopy)	5	5	55	5	5	55	20	5	70	0	0	0	0	0	0

* Existing situation
** Desired management level
*** Anticipated levels through management action

Appendix 17

Successional Stages for Alternative E by Vegetation Type and Zone

MIXED CONIFER FOREST/BRISTLECONE PINE

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	0	0	0	0	0	0	5	0	5	0	0	0	0	0	0
Perennial grasses/Forbs	0	0	0	0	10	0	5	10	5	0	0	0	0	0	0
Perennial grasses/Forbs/ Young aspen, conifer & pine	0	0	0	10	50	5	75	50	45	0	0	0	0	0	0
Mature conifer, aspen & pine	0	0	0	85	30	85	5	30	40	0	0	0	0	0	0
Mature conifer & pine	0	0	0	5	10	10	10	10	15	0	0	0	0	0	0

* Existing situation
** Desired management level
*** Anticipated levels through management action

EGAN RESOURCE MANAGEMENT PLAN

Appendix 17

Successional Stages for Alternative E by Vegetation Type and Zone

SALT DESERT AND DESERT SHRUB/WINTERFAT

Successional Stages	Zone 1			Zone 2			Zone 3			Zone 4			Zone 5		
	E.S.*	D.L.**	A.L.***	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.	E.S.	D.L.	A.L.
Annuals	10	0	5	30	0	10	0	0	0	20	0	10	10	0	0
Perennial grasses/Forbs	10	50	10	15	50	15	0	0	0	0	50	0	0	50	0
Perennial grasses/Forbs/ Young winterfat	50	30	20	45	40	20	0	0	0	0	40	0	0	40	5
Perennial grasses/Forbs/ Mature winterfat	30	20	65	10	10	55	0	0	0	80	10	90	90	10	95

* Existing situation
** Desired management level
*** Anticipated levels through management action

GLOSSARY

GLOSSARY

ACTIVE REFERENCE: The total number of AUMs that can be licensed.

AGRICULTURAL ENTRY: An allowed application that permits an individual to enter upon and develop public lands for irrigated agriculture; completion of which entitles that individual to the land's title.

ALLOTMENT: An area allocated for the use of the livestock of one or more qualified grazing permittees which includes prescribed numbers and kinds of livestock under one plan of management.

ALLOTMENT MANAGEMENT (AMP): A documented program which applies to livestock operations on the public lands, which is prepared in consultation with the permittee(s) or lessee(s) involved, and which: 1) prescribes the manner in which livestock operations will be conducted in order to meet the multiple-use, sustainedyield, economic, and other needs and objectives as determined for the public lands through land use planning; 2) describes the type, location, ownership, and general specifications for the range improvements to be installed and maintained on the public lands to meet the livestock grazing and other objectives of land management; and 3) contains such other provisions relating to livestock grazing and other objectives as may be prescribed by the authorized officer consistent with applicable law.

ANIMAL UNIT (AU): One mature (1,000-lb) cow or its equivalent (4 deer, 5 antelope, 5 bighorn sheep, 1.25 elk, or 1 horse) based upon an average daily forage consumption of 26 pounds of dry matter per day.

ANIMAL UNIT MONTH (AUM): The amount of forage necessary for the sustenance of one cow or its equivalent for one month.

AQUATIC: Living or growing in or on a stream or other water body or source.

BROWSE: That part of the current leaf and twig growth of shrubs, woody vines and trees available for animal consumption.

CARRYING CAPACITY: An estimate of the maximum number of animals (expressed in AUMs) a given area can support each year without inducing damage to the vegetation or related resources.

CHAINING: The process of knocking over, for the purpose of extirpating, pinyon and juniper trees and sagebrush by means of dragging an anchor chain between two large caterpillar tractors.

CHERRYSTEM ROAD: Dead end road which forms part of the boundary of a wilderness study area.

CLIMAX: The terminal stabilized plant community, in which maximum biomass and symbiotic function between organisms are maintained.

CRITICAL GROWTH PERIOD: The period in a plant's growth cycle when food reserves are lowest and grazing is most harmful; for example, in grass species this period begins with the boot (prebud stage) and closes with complete maturation of the fruit.

CRITICAL HABITAT: Any or all habitat element(s), the loss of which, would appreciably decrease the likelihood of the survival and recovery of an officially listed species. It may represent any portion of the present habitat of an officially listed species and may include additional areas for population expansion. The official determination of critical habitat is the responsibility of the U. S.

Fish and Wildlife Service and takes appropriate Federal Register notification and action.

CRUCIAL HABITAT (Range): Habitat on which a species depends for survival; there are no alternative ranges or habitats available. May also be called "key range or habitat".

CULTURAL RESOURCES: Those fragile and nonrenewable remains of human activity, occupation, or endeavor, reflected in districts, sites, structures, buildings, objects, artifacts, ruins, works or art, architecture, and natural features, that were of importance in human events. These resources consist of (1) physical remains, (2) areas where significant human events occurred--even though evidence of the event no longer remains, and (3) the environment immediately surrounding the resource.

DESIGNATED CORRIDORS: A preferred location for expansion which has an existing transmission or transportation facility and room for expansion.

ECOSYSTEM: Collectively, all populations in a community, plus the associated environmental factors.

EROSION: Detachment and movement of soil or rock fragments by water, wind, ice, or gravity.

ESSENTIAL HABITAT: Habitats which possess the same characteristics as critical habitat, but which have not yet been officially designated. It is the responsibility of each Federal agency to conduct the appropriate studies and to provide the biological information necessary to delineate essential habitat.

FORAGE: All browse and herbaceous foods that are available to grazing animals. It may be grazed or harvested for feeding.

FORAGE CONDITIONS: The proportion of preferred, desirable, and undesirable plant species based upon the forage preference or palatability displayed by a specific livestock or wildlife species.

FORB: A nongrass seed-producing plant that does not develop persistent woody tissue.

GRAZING PREFERENCE: The total number (active and suspended nonuse) of animal unit months of livestock grazing on public land apportioned and attached to base property owned or controlled by a permittee.

GRAZING SYSTEM: A systematic sequence of grazing treatments applied to an allotment to reach identified multiple-use goals or objectives by improving the quality and quantity of the vegetation.

GRAZING TREATMENT: A prescription under a grazing system which grazes or rests a unit of land at particular times each year to attain specific vegetation goals.

GREEN-UP: When plants start producing new growth.

GROSS RANCH INCOME: Is equal to the gross sales for an individual ranch or group of ranches.

HABITAT: Place where an animal or plant normally lives, often characterized by a dominant and codominant plant form (e.g. pinyon-juniper habitat).

HABITAT CONDITION (BIG GAME): The condition of seasonal habitat(s) as they relate to the habitat needs of a particular big game species. Habitat components include such factors as browse vigor rating, forage qualty, cover factors, human interference and water distribution for mule deer and water distribution vegetation quality and quantity and vegetation height for antelope. These habitat components are evaluated independently and are somewhat related to but are not the same as existing or potential range condition.

HABITAT MANAGEMENT PLAN: An officially approved plan for a specific geographical area designed to maintain the habitat of specific wildlife species having high priority for management.

IMPROPER UTILIZATION: Grazing of the vegetation resource at levels other than those recommended in the 1981 Nevada Range Studies Task group monitoring Procedures. Includes overutilization, underutilization, and inefficient distribution of grazing.

INCOME MULTIPLIER: An indicator of how much income is stimulated in the economy of a region by an economic sector above and beyond the initial income produced by a sector.

INTENSIVE MANAGEMENT: Managing a vegetation or other resource through a system to obtain desired results.

KEY FORAGE AND BROWSE SPECIES: (1) Forage species whose use serves as an indicator to the degree of use of associated species; (2) those species which must, because of their importance, be considered in the management program.

LICENSED USE: Active use AUMs that a permittee has paid for during a given grazing period.

LOCATABLE MINERAL: A mineral subject to location under the 1872 mining laws. Example of such minerals would be gold, silver, copper, and lead as compared to oil and natural gas, which are leasable minerals.

LONG-TERM: A point in time from 7 to 20 years following the beginning of the implementation phase (1984) of the Egan Resource management plan.

MINERAL POTENTIALS: High Potential - High potential is assigned to areas that contain or are extensions of active or inactive properties which show evidence of ore, mineralization, and favorable geologic characterists. All producing properties fall within this category. Good Potential - Good potential is assigned to areas with several geologic characteristics indicative of mineralization, relatively lower, economic value of past production, and similar environments but at greater distance from known ore and mineral occurrences. This category may include areas adjacent to known districts or in mineral belts.
Low Potential - Low potential is assigned to areas that are outside any construed favorable geologic and mineral trend projections or are buried by over 1,500 meters of alluvium (except oil and gas).

MULTIPLE-USE: The management of public lands and their various resource values so they are utilized in the combination that will best meet the present and future needs of the American people.

MULTIPLIER EFFECTS: The individual effects which spread throughout an economy as the result of a one-unit change in an element of a sector directly impacted by an action, e.g., an income multiplier of 2.1021 for the meat animals and poultry sector means that for a $1 change in income within the sector the overall impact on the economy will be a change in income of $2.10. The indirect effect is the total impact ($2.10) minus the direct impact ($1.00) resulting in an indirect effect of ($1.10).

NET RANCH INCOME: Computed by deducting total cash costs and the value of family labor from gross livestock income.

OFF-ROAD VEHICLE: "Off-Road Vehicle" means any motorized vehicle capable of, or designed for, travel on or immediately over land, water, or other natural terrain, excluding: (1) Any nonamphibious registered motorboat; (2) any militaty, fire, emergency, or law enforcement vehicle while being used for emergency purposes; (3) any vehicle whose use is expressly authorized by the authorized officer, or otherwise officially approved; (4) vehicles in official use; and (5) any combat or combat support; vehicle when used in times of national defense emergencies.

PERMITTEE: One who holds a permit to graze livestock on public land.

PLANNING CORRIDOR: A utility corridor which has no existing transmission or transportation facilities and is a preferred location for future facilities.

PLANT VIGOR: The state of health of a plant. The capacity of a plant to respond to growing conditions, to make and store food and to complete the reproductive stages.

POPULATION: All of the individuals belonging to a single species occupying a particular area of space.

PUBLIC LAND: Vacant, unappropriated, and unreserved lands which have never left Federal ownership; also, lands in Federal ownership which were obtained by the

Government in exchange for public lands or for timber on public lands. Land administered by the Bureau of Land Management.

QUADRAT FREQUENCY METHOD: The use of permanent plots (1000' square) in which measurements or estimates are used to document frequency of key species (rooted in key areas over a period of time).

RANCH BUDGET: An itemized summary of the expenditures and receipts of a ranch operation.

RANGE IMPROVEMENT: A structure, development, or treatment used to rehabilitate, protect, or improve the public lands to advance range betterment.

RANGELAND MONITORING PROGRAM: A program designed to measure changes in plant composition, ground cover, animal populations, and climatic conditions on the public rangeland. Vegetation studies will be used to monitor changes in rangeland condition and determine the reason for any changes that are occurring. The vegetation studies consist of actual use, utilization, trend, and climatic conditions.

REASONABLE NUMBERS: The long-term (10 year) average of big game populations (mule deer, antelope, elk, and bighorn sheep) or the number of individuals historical habitat could support if reintroduction were to occur. These numbers have been cooperatively developed and agreed upon by the Bureau of Land Management and the Nevada Department of Wildlife.

RIPARIAN HABITAT, AQUATIC (STREAMSIDE): Vegetative communities found in association with streams (both perennial and intermittent) lakes, ponds and other open water. This unique habitat, comprising less than 1 percent of the land area, is crucial to the continued existence of the fish species known to occur in the Ely District. Many species are found nowhere else.

ROAD: A vehicle route which has been improved and maintained by mechanical means to insure relatively regular and continued use.

SECTORAL MULTIPLIER: The sum of the portions of the dollar that remains within the region's economy at each turnover by sector (source). A sector is present for each type of expenditure such as for recreation, construction, or retail trade.

SEED TRAMPLING: Trampling of disseminated seed into the soil mantle by livestock, wild horses and burros, and wildlife.

SHORT-TERM: The period of time needed to implement management's decisions following the completion of the RMP, approximately 5 years.

SPECIES, CANDIDATE: (1) Designation applied to sensitive, threatened, or endangered species not yet officially listed but which are undergoing a status review or are proposed for listing according to Federal Register notices published by the Secretary of the Interior or the Secretary of Commerce or according to comparable state documents published by state officials; (2) applied to species whose populations are consistently small and widely dispersed or whose ranges are restricted to a few localities, such that any appreciable reduction in numbers, habitat, availability, or habitat condition might lead toward extinction; of (3) applied to species whose numbers are declining so rapidly that official listing may become necessary as a conservation measure.

SPECIES, ENDANGERED: An animal or plant whose prospects for survival and reproduction are in immediate jeopardy, and as further defined by The Endangered Species Act of 1973.

SPECIES, SENSITIVE: An animal or plant classified by a state government pursuant to state laws and/or regulations, which is faced with potential extinction throughout all or a significant portion of its range, especially within the respective state.

SPECIES, THREATENED: Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range, and as further defined by the Endangered Species Act of 1973.

SUCCESSION: An orderly process of community development that involves changes in species structure and community processes with time; it is reasonably directional and, therefore, predictable.

SUCCESSIONAL STAGE: A relatively transitory plant community, which, when part of an oderly process of community development, culminates in a stabilized ecosystem.

SUSTAINED YIELD: The achievement and maintenance in perpetuity of a high level of annual or regular periodic output of the various renewable resources of the public lands consistent with multiple-use.

THRESHOLD: A threshold is a maximum or minimum number, or other parameter, established to define a significant impact (either positive or negative). If a negative threshold level is crossed, management actions will be taken to correct the situation.

TREND: The direction of change in range condition or wildlife habitat over a period of time, expressed as upward, static, or downward.

UNDERSTORY: Plants growing beneath the canopy of other plants. Usually refers to grasses, forbs, and low shrubs under a tree or brush canopy.

UTILIZATION: The portion of the current year's forage production that is consumed or destroyed by grazing animals.

VEGETATION CONVERSION: Actions taken which alter the existing natural plant communities to achieve the goals of management in a particular area. There are several ways in which vegetation can be altered: (1) with fires; (2) mechanically, which includes chaining, plowing or crushing; (3) chemically; and (4) biologically.

VISUAL RESOURCE MANAGEMENT (VRM): The planning, design, and implementation of management objectives to provide acceptable levels of visual impacts for all BLM resource management activities.

VISUAL RESOURCES: Visible features of the landscape including land, water, vegetation, and animals.

WATERSHED: A total area of land above a given point on a waterway that contributes runoff water to the flow at that point.

WAYS: Vehicle routes established and maintained solely by the passage of motor vehicles.

WILDERNESS CHARACTERISTICS: Identified by Congress in the 1964 Wilderness Act: namely, size, naturalness, outstanding opportunities for solitude or a primitive and unconfined type of recreation, and supplemental values such as geological, archaeological, historical, ecological, scenic, or other features. It is required that the area possess at least 5,000 acres or more of contiguous public land or be of a size to make practical its preservation and use in an unimpaired condition; be substantially natural or generally appear to have been affected primarily by the forces of nature with the imprint of man being substantially unnoticeable; and have either outstanding opportunities for solitude or a primitive and unconfined type of recreation. Congress said a wilderness area may have supplemental values, which include ecological, geological, or other features of scientific, educational, scenic, or historical values. However, the presence or absence of supplemental values could not make or eliminate an area for wilderness designation.

WILDERNESS MANAGEMENT POLICY: This policy document prescribes the general objectives, policies, and specific activity guidance applicable to all designated BLM wilderness areas. Specific management objectives, requirements, and decisions implementing administrative practices and visitor activities in individual wilderness areas are developed and described in the wilderness management plan for each unit.

WILDERNESS STUDY AREA (WSA): A roadless area which has been found to have wilderness characteristics.

WILD HORSE HERD AREA: An area of the public lands which provides habitat for one or more wild horse herds.

WILD HORSE: All unbranded and unclaimed horses and their progeny that have used public lands on or after December 15, 1971, or that do use these lands as all or part of their habitat.

WILDLIFE HAZARD: Any man-caused use, activity or physical feature placed in the environment which causes significant, unnecessary, or avoidable wildlife mortality.

WILDLIFE HABITAT CONFLICT: Any man-caused land or resource use activity which results in serious reduction in the quality and/or quantity of an important wildlife habitat.

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